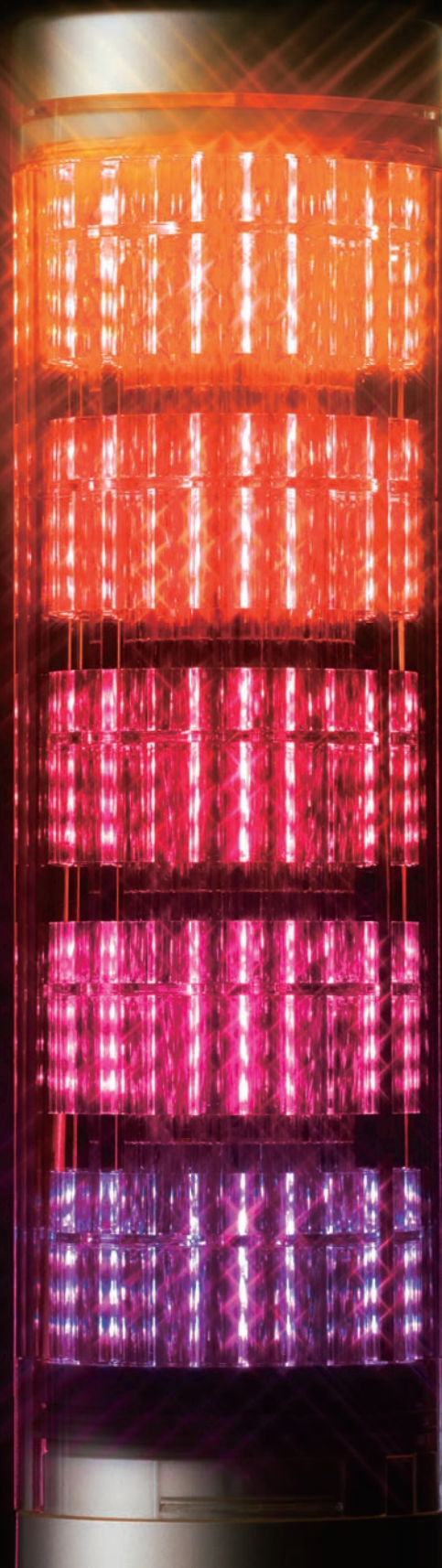


PATLITE[®]
New Frontiers in Safety, Security and Comfort.

GENERAL CATALOG



www.patlite.com

“New Frontiers in Safety, Security and Comfort” is PATLITE’s mission.

PATLITE offers state-of-the-art equipment for process and industrial automation for over 60 years. Our Innovative and robust design, backed by a powerful commitment and years of knowledge, has made PATLITE the world’s best known manufacturer of the visual and audible signaling products.

We are also dedicated to the development of explosive and harsh-environment products to demonstrate our strong commitment to serving the industry with unique and innovative solutions.

In order to identify the diversified needs of our customers, and respond quickly and satisfactorily to those needs, we have implemented the POP (Point of Production) System together with a lean-manufacturing cell-based assembly system (combination, single, and flexible assembly). These new systems allow us to handle any order rapidly from single items to customized item orders.

We’ve also reduced development time and production cost by having our own in-house machinery to produce, design and manufacture metal moldings and plastic materials with the use of injection machinery.

From designing to production, from raw material to the finished product, we also manage our quality control throughout the entire process. This is how we maintain our world class quality reputation in the visual, audible signaling and networking information products.

- From designing to production, quality control is managed throughout the process



• 3D CAD Design



• Metal Part Molding Manufacturing



• Electrical discharge Machine



• Machining Center



• Injection molding Machine

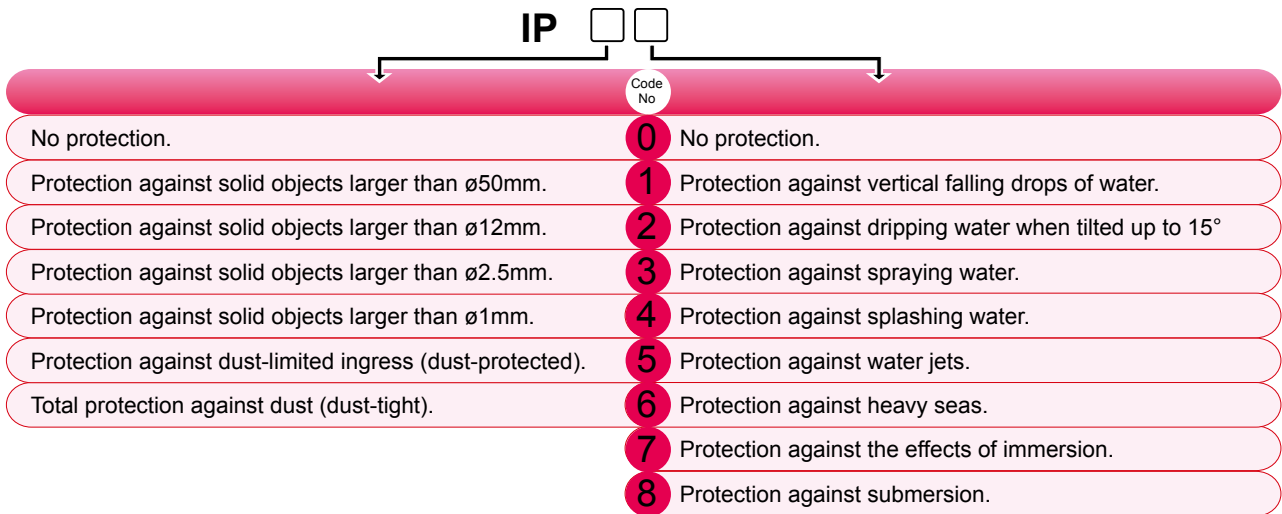
- Wide-range of Innovative and World-class Quality Products



World-wide Sales, Marketing and After-sales Support Network



Index of Ingress Protection defined by CEI / IEC 529



| IP6X | IPX6 | IPX7 | IPX9X |
|--|---|--------------------------------|---|
| Typical Environment | Dusty Environment | Watersplash Environment | Water Exposed Environment |
| <ul style="list-style-type: none"> Control/Switchboard Panel Lighting Machinery and Equipment Lighting | <ul style="list-style-type: none"> Machining/Factory Sites Farmsteads Signboards/Working Lights Commercial/Public Furnishings | | <ul style="list-style-type: none"> Meat and Food Packaging/Processing Industry Beverage Industry Pharmaceutical Industry |

Protection Rating Testing Requirements

- IP6X= The product is placed in a dust chamber with a negative pressure state so that dust is made to float, and there is no invasion inside.
- IPX6= A water nozzle with a diameter of 12.0mm is placed at a range from 2.5 to 3.0 meters with a water velocity of 100 litres per minute injected towards the test piece in an omni direction for three minutes or more without being affected by any harmful influences.
- IPX7= With the distance of 0.15 m from the top of the product to the water surface and a distance from the bottom of the product to the bottom of the tank at a distance of 1 m, it is submerged for 30 minutes with no harmful penetration.

* Since testing is performed under a controlled environment within provisions including a designated time, it does not consider conditions for continuous use.

IP69K IP69K is the German DIN 40050 PART9 standard. It is defined as a protection regulation for high temperature and high-pressurized water. Water is heated up to 80°C and sprayed at a water pressure in the range from 80 to 100 bars at 14 to 16 liters per minute at the test object. The test object is at a distance of 100 to 150 mm from the nozzle and sprayed in all directions at 0, 30, 60, and 90 degrees, then sprayed at a horizontal angle while it is being rotated, all done for a period of 30 seconds without being affected by water penetration.



Symbols Used in this Catalog

Light Source

LED



High-intensity LEDs with about 60,000 hours worth of service life and low power consumption that outlasts any bulb.

Daylight Warm White



Temperature Color LEDs with a service life longer than incandescent and fluorescent, but with lower power consumption.

Bulb



Economical and readily available from PATLITE.

Halogen



Small and bright halogen bulb with long-life.

Sounds

Electronic Sound 1

Alarm with sounds that are easy to recognize and gentle on the ears.

85dB at 1m

Maximum sound pressure level based on controlled environmental conditions and recorded contents (such as melodies, alarms or messages).

4 Channels

The number of channels available when dividing the total recording time to making several different messages.

63 Seconds

The maximum recording time using the standard bit rate for the product. (Standard bit rate is usually 64kb/sec)

Some of PATLITE's audible alarm products may contain copyrighted music or songs which Patlite has not applied for permission to use outside Japan, so please contact your local copyright association before using certain audible alarm products. This disclaimer may not apply if the copyright association has not claimed the copyright of the music or songs in a particular country or jurisdiction.

Protection Resistance

IP69K

Protection Resistance classification for dust-proof, water-proof, and water-jet resistance based on ingress protection index. (CEI/IEC 529).

Explosion-Safe

Meets ATEX, NEC, CE and most other applicable Explosion-Safe standards.

Specifications

Φ60

The diameter size to fit into solutions like compact sized installations to fit perfectly onto that machine.

NPN/PNP Open-collector

Open collector allows direct connection to a PLC without the use of voltage-contact relays, etc.

Dual-face Reflector

The symmetrical dual-face reflectors emit a powerful rotating light.

Cable



Most products come with stranded wiring, but this corresponds to PATLITE products that offer cables as a standard or optional item.

Network

Use the latest technology in network protocol to communicate between product and machine or product-to-product.

Terminals



PATLITE now offers products that come with terminal connections to meet customer demands for easier wiring options.

Audio Icons



Products that emit sounds or voices, or both.



Sounds that are gentle on the ears in familiar sounds like melodies, and distinguishable alarms, along with MP3 programmable messages.



For more details on these products, refer to the Instruction Manuals and specification sheets prior to use. Follow all safeguards to prevent fire, electric shock or other accidents. Specifications are subject to change without prior notice.

Product Index

| A | |
|----------|----|
| AR-070 | 42 |
| AR-078 | 43 |

| B | |
|----------|-----|
| BD-A | 158 |
| BDV | 168 |
| BK | 160 |
| BKV | 170 |
| BM | 156 |
| BSV | 172 |
| BSV-L | 24 |

| C | |
|----------|-----|
| CLA | 146 |
| CLA-EX | 48 |
| CLK | 148 |
| CLK-EX | 47 |
| CLN | 150 |
| CLN-EX | 46 |
| CWA | 152 |
| CWK | 20 |

| E | |
|----------|-----|
| EHS | 162 |
| EHS-EX | 45 |
| EHV | 174 |
| EHV-EX | 45 |

| F | |
|----------|-----|
| FV-127JP | 176 |

| H | |
|----------|-----|
| HKFM | 137 |
| HP | 134 |
| HSST | 105 |

| K | |
|----------|-----|
| KG | 135 |
| KHE | 109 |
| KJ | 142 |
| KJB | 142 |
| KJS | 141 |
| KJSB | 141 |
| KJT | 188 |
| KP-A | 129 |
| KPE-A | 112 |
| KUS | 139 |

| L | |
|----------|-----|
| LA6 | 16 |
| LCE | 58 |
| LCE-U | 58 |
| LCS | 61 |
| LCS-U | 61 |
| LE | 65 |
| LES-A | 63 |
| LFH | 114 |
| LFK-S | 115 |
| LGE | 95 |
| LHE-A | 92 |
| LKEH | 180 |
| LKEH-EX | 44 |
| LME | 72 |
| LME-N | 72 |
| LME-Q | 75 |
| LME-S | 75 |
| LME-U | 72 |
| LMS | 78 |
| LS7 | 80 |
| LU5 | 68 |
| LU7 | 85 |
| LU7-LB | 27 |
| LU7-USB | 26 |
| LU7-V1 | 90 |
| LU7-XE | 91 |

| M | |
|----------|-----|
| ME-A | 52 |
| MES-A | 52 |
| MP | 54 |
| MP-B | 193 |
| MP-C | 56 |
| MPS | 54 |

| N | |
|-----------|-----|
| NE-24 | 108 |
| NE-M1-CL7 | 22 |
| NHL | 30 |

| P | |
|-----------|-----|
| PES-A | 110 |
| PEW-A | 110 |
| PHC-100A | 32 |
| PHE-3FBE1 | 33 |
| PHU-3 | 34 |
| PSE | 113 |

| R | |
|----------|-----|
| RES-A | 49 |
| RFT | 182 |
| RFV | 184 |
| RH-A | 123 |
| RHE | 122 |
| RHEB | 122 |
| RK-A | 123 |
| RKE | 122 |
| RKEB | 122 |
| RLE | 120 |
| RLR | 130 |
| RS | 121 |
| RT | 186 |
| RU | 121 |
| RUP | 121 |

| S | |
|------------|-----|
| SKC-A | 136 |
| SKH-A | 126 |
| SKHB-1006D | 132 |
| SKHE | 127 |
| SKH-EA | 124 |
| SKHEB | 127 |
| SKL-A | 133 |
| SKP-A | 128 |
| SKV-A | 138 |

| V | |
|----------|----|
| VE25 | 36 |
| VE100 | 36 |

| W | |
|----------|-----|
| WD-Z2 | 38 |
| WE | 98 |
| WEP | 98 |
| WH-A | 125 |
| WK-A | 125 |
| WME-A | 101 |
| WSST | 104 |

| X | |
|----------|-----|
| XME | 117 |
| XPE | 116 |

Product Category Index

New Products

| | |
|-----------|----|
| LA6 | 16 |
| CWK | 20 |
| NE-M1-CL7 | 22 |
| BSV-L | 24 |
| LU7-USB | 26 |
| LU7-LB | 27 |

Network Products

| | |
|-----------|----|
| NHL | 30 |
| PHC-100A | 32 |
| PHE-3FBE1 | 33 |
| PHU-3 | 34 |
| VE25 | 36 |
| VE100 | 36 |
| WD-Z2 | 38 |

Explosion-Safe Products

| | |
|---------|----|
| AR-070 | 42 |
| AR-078 | 43 |
| LKEH-EX | 44 |
| EHS-EX | 45 |
| EHV-EX | 45 |
| CLN-EX | 46 |
| CLK-EX | 47 |
| CLA-EX | 48 |
| RES-A | 49 |

Signal Tower

| | |
|-------|----|
| ME-A | 52 |
| MES-A | 52 |
| MP | 54 |
| MPS | 54 |
| MP-C | 56 |
| LCE | 58 |
| LCE-U | 58 |
| LCS | 61 |
| LCS-U | 61 |
| LES-A | 63 |
| LE | 65 |
| LU5 | 68 |
| LME | 72 |
| LME-U | 72 |
| LME-N | 72 |
| LME-S | 75 |
| LME-Q | 75 |
| LMS | 78 |

| | |
|--------|-----|
| LS7 | 80 |
| LU7 | 85 |
| LU7-V1 | 90 |
| LU7-XE | 91 |
| LHE-A | 92 |
| LGE | 95 |
| WE | 98 |
| WEP | 98 |
| WME-A | 101 |
| WSST | 104 |
| HSST | 105 |

Signal Lights

| | |
|-------|-----|
| NE-24 | 108 |
| KHE | 109 |
| PEW-A | 110 |
| PES-A | 110 |
| KPE-A | 112 |
| PSE | 113 |
| LFH | 114 |
| LFK-S | 115 |
| XPE | 116 |
| XME | 117 |

Revolving Warning Lights

| | |
|------------|-----|
| RLE | 120 |
| RU | 121 |
| RUP | 121 |
| RS | 121 |
| RKE | 122 |
| RKEB | 122 |
| RHE | 122 |
| RHEB | 122 |
| RH-A | 123 |
| RK-A | 123 |
| SKH-EA | 124 |
| WH-A | 125 |
| WK-A | 125 |
| SKH-A | 126 |
| SKHE | 127 |
| SKHEB | 127 |
| SKP-A | 128 |
| KP-A | 129 |
| RLR | 130 |
| SKHB-1006D | 132 |
| SKL-A | 133 |

| | |
|-------|-----|
| HP | 134 |
| KG | 135 |
| SKC-A | 136 |
| HKFM | 137 |
| SKV-A | 138 |
| KUS | 139 |
| KJS | 141 |
| KJSB | 141 |
| KJ | 142 |
| KJB | 142 |

LED Lights

| | |
|-----|-----|
| CLA | 146 |
| CLK | 148 |
| CLN | 150 |
| CWA | 152 |

Alarm Products

| | |
|------|-----|
| BM | 156 |
| BD-A | 158 |
| BK | 160 |
| EHS | 162 |

Voice & Sound

| | |
|----------|-----|
| BDV | 168 |
| BKV | 170 |
| BSV | 172 |
| EHV | 174 |
| FV-127JP | 176 |








Hybrid Products

| | |
|------|-----|
| LKEH | 180 |
| RFT | 182 |
| RFV | 184 |
| RT | 186 |
| KJT | 188 |

Optional Parts

| | |
|-------------------|-----|
| Optional Parts | 192 |
| MP-B | 193 |
| Melody Charts | 201 |
| Replacement Bulbs | 202 |

Network

| | | | | | | | |
|---------------------|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| Page No. | 30 | 33 | 32 | 34 | 38 | | |
| Model | NHL | PHE-3FBE1 | PHC-100A | PHU-3 | WDR-LE-Z2 | WDT-5E-Z2 | WDT-6M-Z2 |
| Voltage | DC 5V | | | ●** | | | |
| | DC 12V | | | | | | |
| | DC 24V | ●* | ●* | ●* | ●* | ●*** | ●*** |
| Network Connection | LAN | ● | | | ● | | |
| | USB | | | ● | ● | | |
| | RS-232C | | ● | ● | | | |
| | Wireless | | | | ● | ● | ● |
| Body Color | White | ● | | | | | |
| | Ivory White | | ● | ● | ● | ● | ● |
| | Black | | | | | | |
| Output (dB (at 1m)) | 80 | 80 | - | - | - | - | - |
| Protection Rating | IP20 | - | - | IP20 | IP20 | ⊙ | ⊙ |







⊙ IP Rating is the same as the Signal Tower its attached to.

* Uses AC Adaptor

** Uses USB Power Source

*** Uses Signal Tower Power Source

Explosion-proof






| | | | | | | |
|---------------------|---|---|---|--|---|---|
| |  |  |  |  |  |  |
| Page No. | 42 | 43 | 45 | 44 | | 46 |
| Model | AR-070 | AR-078 | EHS/EHV | LKEH-FV | LKEH-FE | CLN |
| Voltage | DC12V | | ● | | | |
| | DC24V | ● | ● | ● | ● | ● |
| | AC24V | ● | ● | | | |
| | DC48V | | | | | |
| | AC100-110V | | | | | |
| | AC115-120V | | | | | |
| | AC200-220V | | | | | |
| AC230-240V | | | | | | |
| Conformity | CE | ● | ● | ● | ● | ● |
| | Ex | ● | ● | ● | ● | ● |
| Zone | 2, 22 | 2, 22 | 2, 22 | 2, 22 | 2, 22 | 2, 22 |
| Output (dB (at 1m)) | 85 | 85 | 110 | 105 | 105 | - |
| Protection Rating | IP65 | IP65 | IP65 | IP53 | IP53 | IP66G/67G/69K |

| | |
|-------|-------|
| | |
| 36 | |
| VE25 | VE100 |
| ●* | ●* |
| | |
| | |
| | |
| ● | ● |
| - | - |
| - | - |







| | | |
|---------------|-------------|-------|
| | | |
| 47 | 48 | 49 |
| CLK | CLA | RES-A |
| ● | ● | ◎ |
| | | ◎ |
| | | ◎ |
| | | ● |
| | | ◎ |
| | | ● |
| | | ◎ |
| ● | ● | |
| ● | ● | |
| 2, 22 | 2, 22 | 1, 2 |
| - | - | - |
| IP66G/67G/69K | IP66/67/69K | IP65 |

© Available upon special order.

Signal Tower

| | | | | | | | | | | | |
|---------------------|-------------|---|-------|--|-----|--|-----|---|-----|---|---|
| | |  | |  | |  | |  | |  | |
| Page No. | | 52 | | 54 | | 56 | | 58 | | 61 | |
| Model | | ME-A | MES-A | MP | MPS | MP-C | LCE | LCE-U | LCS | LCS-U | |
| Size (φmm) | | 25 | | 30 | | | | 40 | | | |
| Voltage | AC/DC12V | | | | | | | | | | |
| | DC24V | ● | ● | | | | | | | | |
| | AC/DC24V | | | ● | ● | ● | ● | ● | ● | ● | ● |
| | AC90-250V | | | | | | ● | ● | | | |
| | AC100V | | | | | | | | | | |
| | AC120V | | | | | | | | | | |
| | AC220V | | | | | | | | | | |
| | AC230V | | | | | | | | | | |
| Body Color | White | | | | | | | | | | |
| | Ivory White | | | | | | ● | | ● | | |
| | Silver | ● | ● | ● | ● | ● | | ● | | ● | |
| | Black | | | | | | | | | | |
| Connection Type | Lead Wires | ● | ● | ● | ● | | ● | ● | ● | ● | |
| | Terminal | | | | | | | | | | |
| | M12 QD | | | | | ● | | | | | |
| Transistor Input | PNP | | | ● | ● | ● | ● | ● | ● | ● | |
| | NPN | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Flashing Function | | | | | | | ● | ● | | | |
| Output (dB (at 1m)) | | - | | - | | | | 85 | | - | |
| Protection Rating | | IP42 | | IP65 | | | | IP65 | | IP54 | |

◎ Available upon special order.







| | | | | | | | | | | | | | |
|---------------------|-------------|---|-------|---|---------|---|--------|---|-----|---|-------|---|--|
| | |  | |  | |  | |  | |  | |  | |
| Page No. | | 92 | | 80 | | 26 | | 85 | | | | | |
| Model | | LHE-A | LS7-H | LS7-C | LU7-USB | LU7-S | LU7-SU | LU7-SK | LU7 | LU7-U | LU7-K | | |
| Size (φmm) | | | | | | 70 | | | | | | | |
| Voltage | DC5V | | | | ● | | | | | | | | |
| | DC12V | | | | | | | | | | | | |
| | DC24V | | ● | ● | | ● | ● | ● | ● | ● | ● | ● | |
| | AC/DC24V | ● | | | | | | | | ● | ● | ● | |
| | AC90-250V | | | | | | | | | | | | |
| | AC100V | ● | | | | | | | | | | | |
| | AC120V | | | | | | | | | | | | |
| | AC220V | ● | | | | | | | | | | | |
| Body Color | White | | ● | ● | | | | | | | | | |
| | Ivory White | ● | | | ● | ● | | | ● | | | | |
| | Silver | | ● | ● | | | ● | | | ● | | | |
| | Black | | ● | ● | ● | | | ● | | | ● | | |
| Connection Type | Lead Wires | ● | ● | | | | | | | | | | |
| | Terminal | | | | | ● | ● | ● | ● | ● | ● | | |
| | M12 QD | | | ● | | | | | | | | | |
| Transistor Input | PNP | ● | ● | ● | | ● | ● | ● | ● | ● | ● | | |
| | NPN | ● | ● | ● | | ● | ● | ● | ● | ● | ● | | |
| Flashing Function | | ● | ● | | ● | ● | ● | ● | ● | ● | ● | | |
| Output (dB (at 1m)) | | 90 | 85 | | 80 | 90 | | | | | | | |
| Protection Rating | | IP65 | IP65 | | IP65 | IP65 | | | | | | | |

| | | | | | | | | | | | |
|------|-------|------|-------|-------|------|------|-------|-------|------|-------|-------|
| | | | | | | | | | | | |
| 65 | 63 | 68 | | | 16 | 72 | | | 78 | 75 | |
| LE | LES-A | LU5 | LU5-U | LU5-K | LA6 | LME | LME-U | LME-N | LMS | LME-S | LME-Q |
| 50 | | | | | 60 | | | | | | |
| ● | | ● | ● | ● | ● | | | | | ● | ● |
| ● | ● | | | | | ● | ● | ● | ● | | |
| ● | | | | | | ● | ● | ● | | ● | ● |
| ● | | | | | | ● | ● | ● | | ● | ● |
| ● | | | | | | ● | ● | ● | | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◎ | ◎ |
| ● | | ● | ● | ● | ● | ● | ● | ● | | ● | ● |
| 85 | - | 85 | | | 85 | 85 | | | | 85 | |
| IP54 | IP65 | IP65 | | | IP65 | IP65 | | | IP65 | IP65 | |

| | | | | | | | |
|------|-----------|---------|---------|---------|-----------|------|------|
| | | | | | | | |
| 95 | 98 | 101 | 139 | 141 | 142 | 104 | 105 |
| LGE | WE/WEP | WME-A | KUS | KJS(B) | KJ(B) | WSST | HSST |
| 100 | W90xD37.5 | W70xD80 | 70 x 70 | 82 x 82 | 116 x 116 | | |
| | | | | ● | | | |
| | | | | ● | | ●* | ●* |
| ● | ● | ● | ● | ● | ● | | |
| ● | | ● | ● | ● | ● | | |
| ● | | ● | ● | ● | ● | | |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | | |
| ● | ● | ● | ● | ● | ● | | |
| ● | ● | ● | ● | ● | ● | | |
| 85 | 90 | 90 | 80 | 85 | 85 | - | - |
| IP54 | IP65 | IP54 | IP54 | IP23 | IP23 | - | - |










* Uses AC Adaptor

Signal Light

| | | | | | | |
|------------------------------|---|---|---|--|---|---|
| |  |  |  |  |  |  |
| Page No. | 22 | 108 | 110 | 113 | 109 | 114 |
| Model | NE-M1-CL | NE-24 | PES-A | PSE | KHE | LFH |
| Size (φmm) | 57 | | 82 | | 100 | |
| Voltage | DC12V | ● | | ● | ● | ● |
| | DC24V | ● | ● | ● | ● | ● |
| | AC24V | | | ● | | |
| | DC48V | | | | | ● |
| | AC100-230V | | | | ● | ● |
| | AC100V | | | ● | | |
| | AC120V | | | ● | | |
| | AC200V | | | ● | | |
| | AC220V | | | ● | | |
| | AC230V | | | ● | | |
| Body Color | White | ● | ● | ● | ● | ● |
| | Black | | | | | ● |
| Transistor Input | PNP | ● | ● | ● | | |
| | NPN | ● | ● | ● | | |
| Output (dB (at 1m)) | - | - | - | - | - | - |
| Protection Rating (w/Gasket) | IP66/67 | IP65 | IP23 (55) | IP23 (55) | IP23 (55) | IP66 |

△ Due to a specification change, body colors for Red and Yellow globes will be the same, but green and blue globes will have a white body.

Revolving Warning Light

| | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |  |  |
| Page No. | 120 | 121 | | 122 | 122 | 123 | | 124 | 125 |
| Model | RLE | RU | RS | RKE | RHE | RH-A | RK-A | SKH-EA | WH-A |
| Size (φmm) | | 82 | | | | 100 | | | 100 |
| Voltage | DC12V | ● | ● | ● | ● | ● | ● | ● | ● |
| | DC24V | ● | ● | ● | ● | ● | ● | ● | ● |
| | AC24V | | ● | | | | | | |
| | DC48V | | | | ● | ● | | | |
| | DC100V | | | | | | | | |
| | AC100V | ● | ● | ● | ● | ● | ● | ● | ● |
| | AC120V | | | | | | ● | ● | |
| | AC200V | | | | ● | ● | ● | ● | ● |
| | AC220V | ● | ● | ● | | | | | ● |
| | AC240V | | | | | | ● | ● | |
| AC100-240V | | | | | | | | | |
| Body Color | White | ● | ● | ● | ● | ● | ● | △ | ● |
| | Black | | | | | | | | |
| Globe Color | Red | ● | ● | ● | ● | ● | ● | ● | ● |
| | Yellow | ● | ● | ● | ● | ● | ● | ● | ● |
| | Green | ● | ● | ● | ● | ● | ● | ● | ● |
| | Blue | | ● | ● | ● | ● | ● | ● | ● |
| | Violet | | | | | | | | |
| Light | Bulb | | ● | ● | | | ● | ● | ● |
| | LED | ● | | | ● | ● | | | |
| | Halogen | | | | | | | | |
| Output (dB (at 1m)) | - | - | - | 88 | 88 | 90 | 90 | - | 90 |
| Protection Rating (w/ Gasket) | IP23 (55) | IP23 (55) | IP23 (55) | IP23 (55) | IP23 (55) | IP23 (55) | IP23 (55) | IP23 | IP54 |



△ Due to a specification change, body colors for Red and Yellow globes will be the same, but green and blue globes will have a beige body.

| | | | | |
|--------|-----------|-------|--------|--------|
| | | | | |
| 115 | 110 | 112 | 116 | 117 |
| LFK | PEW-A | KPE-A | XPE | XME |
| 100 | 107 | 162 | | 187 |
| ● ● | ● ● | | ● ● | ● ● |
| ● ● | ● ● | | ● | ● |
| | ● ● | ● | | |
| | ● ● | ● | | |
| ● | ● | ● | ● | △ |
| | ● | | | |
| - | 85 | - | - | - |
| IP55 | IP54 (23) | IP23 | IP23 | IP23 |

| | | | | | | | | | | | | |
|------------------|------------------|------------------|------------------|------------------|------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| | | | | | | | | | | | | |
| 125 | 126 | 127 | 128 | 129 | 132 | 133 | 130 | 134 | 135 | 136 | 138 | 137 |
| WK-A | SKH-A | SKHE(B) | SKP-A | KP-A | SKHB-1006D | SKL-A | RLR | HP | KG | SKC-A | SKV-A | HKFM |
| 100 | 118 | | 138 | 162 | | | | 182 | 186 | 187 | 204 | - |
| ● ● | ● ● ● | ● ● | ● ● | ● | | ● ● | ● ● | ● ● | ● ● | ● ● | ● ● | ● ● |
| ● ● | ● ● | ● ● | ● ● | ● | ▲ | ● ● | ● ● | | ● | ● ● | ● ● | ● ● |
| ● | ● ● | ● ● | ● | ● | | ● | | | | | ● | ● |
| ● | | | △ | ● | ● | △ | ● | | | △ | ● | |
| ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● | ● ● | ● ● ● ● | ● ● ● ● | ● ● ● ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 90 | 90 | 88 | - | - | 75 | - | - | - | - | - | - | - |
| IP54 | IP23 | IP23 | IP23 | IP23 | IP23 | IP23 | IP66 | - | IP23 | IP23 | IP66 | - |

▲ Used for charging, operates on a 6V battery supply.





LED Lights

| | | | | | | | | | | |
|-------------------|-----------------|--|-----|-----|-----|-----|---|-----|-----|-----|
| | |  | | | | |  | | | |
| Page No. | | 146 | | | | | 148 | | | |
| Model | | CLA | | | | | CLK | | | |
| Size (mm) | | 1S | 2S | 3S | 6S | 9S | 12S | -AG | | |
| Voltage | | 100 | 200 | 300 | 600 | 900 | 1200 | 200 | 300 | 600 |
| Body Material | DC24V | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Aluminum | | | | | | | ● | ● | ● |
| | Stainless Steel | | | | | | | | | |
| Cover | Polycarbonate | ● | ● | ● | ● | ● | ● | | | |
| | Tempered Glass | | | | | | | ● | ● | ● |
| | PMMA Resin | | | | | | | | | |
| Light Color | Polycarbonate | ● | ● | ● | ● | ● | ● | | | |
| | Temperature (K) | 6800K (-CD), 4800K (-CN) | | | | | 6500K (-CD), 5000K (-CN) | | | |
| Resistance | Amber | | | ● | | | | | | |
| | Water | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Oil | | | | | | | ● | ● | ● |
| | Corrosion | | | | | | | | | |
| Protection Rating | | IP66/67/69K | | | | | IP66G/67G/69K | | | |
| Dust | | ● | ● | ● | ● | ● | ● | ● | ● | ● |


Audible Alarms & Annunciators





| | | | | | | | | | | | | | |
|-------------------------------|-----------------|--|------|--|--|--|---|--|--|--|--|--|--|
| | |  | |  |  |  |  |  |  |  |  |  |  |
| Page No. | | 156 | | 158 | 160 | 172 | 24 | 168 | 170 | 162 | 174 | | |
| Model | | BM | BM-H | BM-D | BD | BK | BSV | BSV-L | BDV | BKV | EHS | EHV | |
| Size (mm) | | φ30 | φ30 | φ30 | 80 | 120 | 75 | 75 | 80 | 120 | - | | |
| Voltage | DC12-24V | | | | ● | ● | | | ● | ● | ● | ● | |
| | DC24V | | | | | | ● | ● | | | | | |
| | DC 12-48V | | | | | | | | | | ● | ● | |
| | AC/DC24V | ● | ● | ● | | | | | | | | | |
| | AC100V | ● | ● | ● | ● | ● | | | ● | ● | | | |
| | AC120V | | ● | | | | | | | | | | |
| | AC220V | ● | ● | ● | ● | ● | | | ● | ● | | | |
| AC100-240V | | | | | | | | | | | ● | ● | |
| Body Color | Light Gray | | | | ● | ● | | | ● | ● | | | |
| | White | | | | | | ● | ● | | | ● | ● | |
| | Dark Gray | | | | ● | ● | | | ● | ● | | | |
| | Black | ● | ● | ● | | | ● | ● | | | | | |
| | Silver | | | | | | ● | ● | | | | | |
| Sound Function | MP3 | | | | | | ● | ● | ● | ● | ● | ● | |
| | Melody/Alarm | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ● |
| | Sound Reduction | | | | | | ● | ● | | | ● | ● | |
| Transistor Input | PNP | ● | ● | ● | ⊙ | ⊙ | ● | ● | ⊙ | ⊙ | ● | ● | |
| | NPN | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Output (dB (at 1m)) | | 85 | 90 | 80 | 90 | 95 | 87 | | 87 | 95 | 110 | 110 | |
| Channel Inputs (Bit (Binary)) | | 2 | 2 | 2 | 4 | 8 (32) | 4 (15) | 4 (15) | 4 (15) | 5 (31) | 8 (32) | 8 (63) | |
| Playback Sounds (sec) | | - | - | - | - | - | 63 | 520 | 63 | 63 | | 220 | |
| Protection Rating | | IP30 | IP30 | IP34 | IP54 | IP54 | IP54 | | IP54 | IP54 | IP65 | | |

⊙ Available upon special order.

| | | | |
|---|--|--|---|
|  |  |  |  |
| 148 | 150 | 152 | 20 |
| CLK | CLN | | |
| -SA/-SG | -T | - (P)T | |
| 300 | 85x85 | 300 | 200 |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● (-SG) | ● | ● | ● |
| ● (-SA) | | ● | ● |
| 6500K (-CD), 5000K (-CN) | 6500K (-CD), 2700K (-CL) | 6500K (-CD) | 6500K (-CD) |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| IP66G/67G/69K | IP66G/67G/69K | IP65 | IP66G/67G |

Hybrid Annunciators

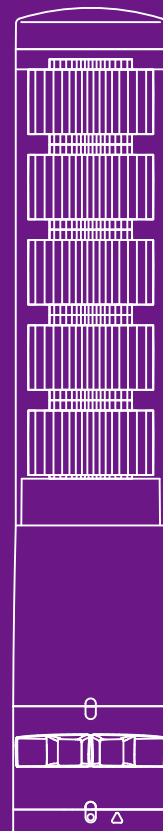
| |
|--|
|  |
| 176 |
| FV-127JP |
| - |
| ● |
| ● |
| ● |
| ● |
| ● |
| ● |
| 7 (127)* |
| 480 |
| - |

| | | | | | | | | |
|--------------------------|--|---|--|--|--------|--------|--------|--------|
| |  |  |  |  | | | | |
| Page No. | 180 | 182 | 184 | 186 | 188 | | | |
| Model | LKEH-FE LKEH-FV | RFT | RFV | RT-F | RT-VF | KJT | | |
| Size (mm) | φ100 | 115 | | φ162 | | 116 | | |
| Voltage | DC24V | ● | ● | ● | ● | ● | | |
| | AC24V | | | | | | | |
| | AC100V | ● | ● | ● | ● | ● | | |
| | AC120V | | | | | | | |
| | AC200V | | | | | | | |
| Sound Function | AC220V | ● | ● | ● | ● | ● | | |
| | MP3 | | ● | ● | ● | ● | | |
| Transistor Input | Melody/Alarm | ● | ● | ● | ● | ● | | |
| | PNP | | | | | | | |
| | NPN | ● | ● | ● | ● | ● | | |
| Output (dB (at 1m)) | | 105 | 105 | 90 | 95 | 105 | 105 | 85 |
| Channel Inputs | | 8 (32) | 5 (31) | 8 (32) | 4 (15) | 8 (32) | 4 (15) | 8 (32) |
| Playback Duration (sec.) | | - | 63 | - | 63 | - | 63 | - |
| Protection Rating | | IP53 | IP53 | IP54 | IP54 | IP23 | IP23 | IP23 |

* When SD Card is used.



New Products



LA6

Signal Tower



- LED
- 11 Alarm Sounds
- 85dB at 1m
- IP65 (B Type:IP54)
- Ø60

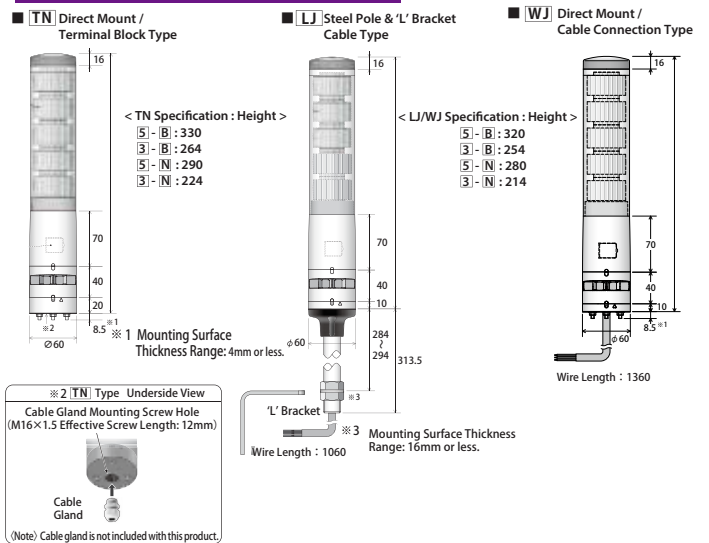


Display a variety of colors in various ways to improve your processes.

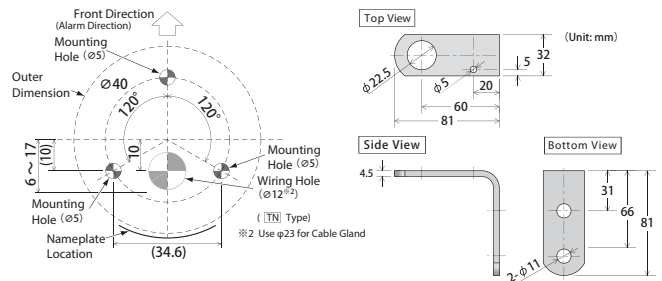
FEATURES

- Indicate abnormal conditions with a variety of color patterns. Can freely set up multiple colors. For example, a serious condition can be indicated with the "All-point Lighting" where the entire signal tower is the same color, thus conveying important information.
- Use "Operating Modes" to enhance a visual status condition. The downloadable program can be used to make patterns change at set intervals so the signal tower can be used to count time or set a pace.
- Simple and easy to use complimentary programming software. The downloadable complimentary programming software can be used to easily control which colors are displayed and how they are to behave.

Dimensions (Unit: mm)



L' Bracket Dimensional Drawing



How to Order

Signal Tower LA6- ① D ② ③ ④ - ⑤

Example: LA6-5DTNUB-RYGBC

- LED Tiers...5
- Body Color...Silver
- Flashing-Alarm...with Flash and Alarm
- Mounting/Wiring...Direct Mount/Terminal Buss
- Color...Red/Amber/Green/Blue/White

① LED Tiers ② Mounting/Wiring ③ Body Color ④ Flashing/Alarm ⑤ Color

3: 3 Tiers WJ: Direct/Cable W: Off-white B: With RYG: 3 Tiers

5: 5 Tiers TN: Direct/Terminal U: Silver N: Without RYGBC: 5 Tiers

LJ: Steel Pole & Angle/Cable

※ The LED light color for each tier can be changed after purchase. ※ LJ type does not have a "U" (Silver) specification.



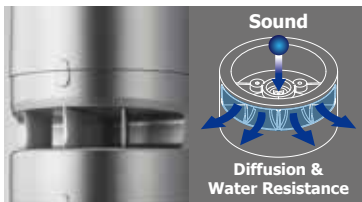
An internal Mode Switch is available. Use the internal mode switch to easily set up various functions, such as the alarm volume.



A new lens design optimizes visibility. The newly developed lens design efficiently diffuses LED light so that it is unmistakably visible, even from great distances.



Freely change luminescence colors and patterns with editing software. Upload colors and patterns using the editing program to the signal tower using a USB cable* connected to a PC. *The USB cable is sold separately (USB microB type with Charging/ Data Transfer capability).



The alarm has a total of 11 sounds to match various applications. The water-resistant speaker design is able to play clear sounds of up to 85 dB (at 1m) despite its compact size. Alarm sounds can be set up with every display pattern.



Replacement Parts



Headcover (Off-white) B31310001-7F1 (Silver) B31310001-9F1



USB Port Cover (Off-white) B22100071-7F1 (Silver) B22100071-9F1



Waterproof Ring 'B' B25110042-F1

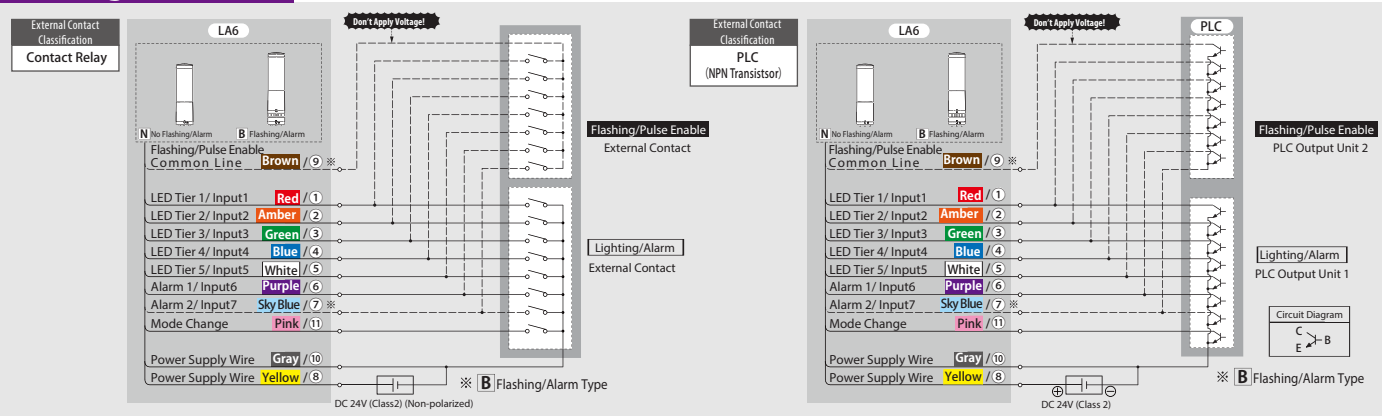


Pole Bracket (Off-white) B22210134-7F1



Waterproof O-ring B25110047-F1

Wiring



Specifications

| | | | | | | |
|---------------------------------|--|--|-------------|----------------------------------|------------------|------|
| Model | LA6-□D□□□-□ | | | | | |
| Rated Voltage | DC24 V | | | | | |
| Operating Voltage Range | ±10% of Rated Voltage | | | | | |
| Rated Power Consumption | Standard | LA6-5 D□□N-RYGBC | 5W | | LA6-5 D□□B-RYGBC | 6.5W |
| | | LA6-3D□□N-RYG | 3.5W | | LA6-3D□□B-RYG | 4.5W |
| | Maximum | LA6-5 D□□N-YYYY | 7W | | LA6-5 D□□B-YYYY | 8W |
| | | LA6-3D□□N-YYY | 4.5W | | LA6-3D□□B-YY | 5.5W |
| Test Condition | Power Consumption test with alarm set at Alarm Sound No.1 at maximum volume | | | | | |
| Signal Wire Current | Maximum 70mA | | | | | |
| Standby Current | Maximum 15mA | | | | | |
| Operating Ambient Temperature | -25□ to +60□ | | | | | |
| Operating Humidity Range | Less than 90% RH (No Dew or Condensation) | | | | | |
| Storage Temperature Range | -25□ to +60□ | | | | | |
| Storage Humidity Range | Less than 90% RH (No Dew or Condensation) | | | | | |
| Mounting Location | Indoor Only | | | | | |
| Mounting Direction | Upright/Inverted Direction | | | | | |
| Protection Rating | IP65 (With alarm: IP54) IEC 60529 | | | | | |
| Test Condition | Installed in an upright position | | | | | |
| Vibration Resistance | LA6-□□LJ□□ | Sweep Durability: Total amplitude: 0.3 mmp-p (10 - 57.5 Hz), Acceleration: 20.0 m/s ² (57.5 - 150 Hz) Fixed pitch durability: Acceleration 20.0 m/s ² | | | | |
| | LA6-□□TN□□ LA6-□□WJ□□ | Sweep Durability: Total amplitude 0.3 mmp-p (10 - 57.5 Hz), Acceleration: 20.0 m/s ² (57.5 - 150 Hz) Fixed Vibration Frequency Durability: Acceleration 10.0 m/s ² | | | | |
| | | JIS C 60068-2-6:2010 | | | | |
| Test Condition | Tested while installed in an upright position | | | | | |
| Insulation Resistance | More than 1Mohm at DC500V between the power input lead and chassis. | | | | | |
| Withstand Voltage | 500VAC for 1min between terminals and chassis without breaking insulation | | | | | |
| Display Color | red (1000 mcd) yellow (1700 mcd) green (2600 mcd) blue (1000 mcd) white (1250 mcd) | | | | | |
| (Typical Luminous Intensity) | Purple (800 mcd) pink (850 mcd) cyan (2150 mcd) lemon (2150 mcd) * Due to the characteristics of the LED elements, a variation in difference of the color tone and brightness of every product may occur. | | | | | |
| Flash Rate | 60 ±2 fpm | | | | | |
| Alarm Sound (Typical Frequency) | No. 1 | 2400Hz Continuous beep sound | No. 2 | 2400Hz Rapid intermittent beep | | |
| | No. 3 | 2400Hz Long intermittent beep | No. 4 | 2400Hz Fast intermittent beep | | |
| | No. 5 | 3600Hz Continuous beep | No. 6 | 3600Hz Rapid intermittent beep | | |
| | No. 7 | 3600Hz Long intermittent beep | No. 8 | 3600Hz Fast intermittent beep | | |
| | No. 9 | 2400Hz & 3375Hz Multiplexed Beep | No. 10 | 2400Hz & 3600Hz Multiplexed Beep | | |
| | No. 11 | 4000Hz & 4800Hz Multiplexed Beep | | | | |
| | | | | | | |
| Sound Level | Maximum: 85dB | | | | | |
| Test Condition | Alarm Sound No.1 measured from the front direction of the alarm opening at 1m | | | | | |
| Volume Control | The set up button is the fourth step (Factory Default: Maximum). | | | | | |
| | [Maximum] -> [-5dB drop from maximum (standard)] -> [-10dB drop from maximum (standard)] -> [OFF] (-> Returns to [Maximum]) | | | | | |
| Data Transfer Interface | Main Unit | USB micro-B Terminal Female USB2.0/1.1 Interface, Transmission Rate: USB2.0/1.1/1.0 | | | | |
| | Transfer Cable | Charge /Data Transfer Micro USB (not included); Connector: USB Male- USB (MicroB) male | | | | |
| Application Software | Exclusive Application Software (Downloadable from our Homepage) | | | | | |
| Mass (Tolerance 10%) | LA6-3DTN□B | 480g | LA6-3DLJ□B | 980g | LA6-3DWJ□B | 450g |
| | LA6-3DTN□N | 420g | LA6-3DLJ□N | 930g | LA6-3DWJ□N | 400g |
| | LA6-5 DTN□B | 590g | LA6-5 DLJ□B | 1090g | LA6-5 DWJ□B | 560g |
| | LA6-5 DTN□N | 530g | LA6-5 DLJ□N | 1040g | LA6-5 DWJ□N | 510g |
| Compliance Standards | EMC Directive (EN 61000-6-4, EN 61000-6-2) | | | RoHS Directive (EN 50581) | | |
| | UL508, CSA-C22.2 No.14 | | | KC (KN 61000-6-4, KN 61000-6-2) | | |
| | FCC Part 15 SubpartB Class A | | | CE Marking | | |
| Remarks | UL Recognized Component (File No.E215660) | | | | | |

Success Story

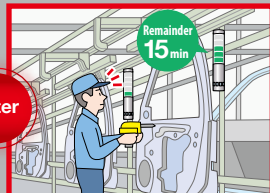
Case 1 Manage and control assembly line progress with "takt time visualization!"



Before

Uneven task completion!

Worker did not know how long it was taking to complete task, causing uneven progress of the entire assembly line and delays.

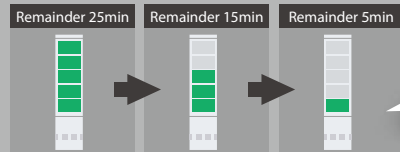


After

Visible progress -> Even completion!

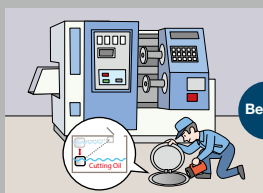
Workers can pace themselves to complete their tasks on time. The entire line can move more evenly and delays are reduced.

■ Display remaining work time with the number of tiers



Task progress is understood in real time!

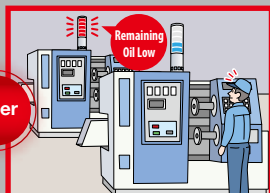
Case 2 Replenish with precise timing with "cutting fluid level visualization!"



Before

The amount of oil is unknown!

Cutting fluid level in the underground tank was unknown. Operators wasted a lot of time opening the tank to verify how much fluid was left.



After

The amount of oil is visible from a distance!

The amount of fluid in the tank could be determined with a glance, even from great distances, allowing quicker response to multiple machines, and improved operator productivity.

■ Remaining tank level indication



The status of the amount of oil can be seen at a glance from a distance!

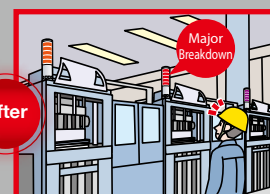
Case 3 Various machines can be monitored more precisely for abnormal conditions!



Before

An error condition is not understood!

Abnormalities for equipment was displayed and could be seen from a distance but its severity could not be determined unless extra time was taken to approach the machine.

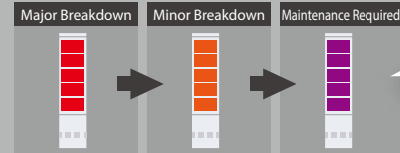


After

Various errors are now visible from a distance!

Now equipment can be checked for abnormalities at a glance from a distance, and when all tiers light up prompt attention can be given.

■ All tiers light-up for abnormal conditions.



According to color, each status can be seen at a glance from a distance!

CWK

LED Light Bar



Daylight

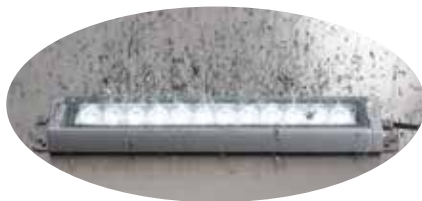


IP66G/67G

3meter Cable

Water and Oil resistant high-power LED Work Light with a wider illumination span.

- Made of aluminum alloy and tempered glass which is resistant to water and tooling oils.
- Special design disperses light for a wider and brighter illumination in the work space.
- The illuminance corresponds to EN1873 for safer exposure to eyes when working in the illuminated area.
- The product lineup includes a mounting bracket and two bracket options (swivel or panel mount) to adapt to various scenarios.
- Conforms to CE and RoHS requirements.
- UL Listed (File No. E306141).



The body is protected by the tempered glass which disperses the flying scrap.



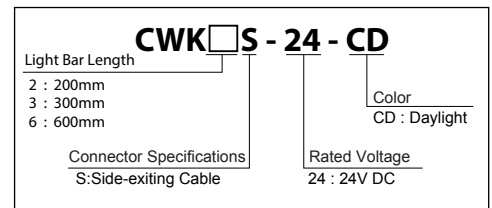
It has passed the oil resistant test from common cutting oils.

[Accelerated aging test with diluted oil at 55°C for 240 hours (10 days) sprayed onto the test object]

Specifications

| Model | CWK2S-24 | CWK3S-24 | CWK6S-24 |
|--------------------------------------|---|------------|------------|
| Luminous Color | Daylight | | |
| Color Temperature (typ.) | 6500K | | |
| Illuminance (typ.) (at DC24V) 1.0m | 600 lx | 850 lx | 1500 lx |
| Total Luminous Flux (typ.) | 800 lm | 1200 lm | 2400 lm |
| Operating Voltage Range | 24VDC ±10% | | |
| Rated Current Consumption | 360mA ±10% | 480mA ±10% | 960mA ±10% |
| Rated Power Consumption | 8.6W | 11.5W | 23.0W |
| Operating Ambient Temperature | -10°C - +50°C | | |
| Operating Ambient Humidity | 90% RH or less, no condensation | | |
| Main Unit Material | Body: Aluminum Alloy; Lens: Tempered Glass | | |
| Cable Length | 3 meters | | |
| Mounting Location | Indoors | | |
| Protection Rating | IP66G/ IP67G (JIS C0920) | | |
| Insulation Resistance | 500V DC 5MΩ or more | | |
| Withstand Voltage | 500VAC for 1 minute (Between terminals and chassis) | | |
| Vibration Resistance | 30Hz 20m/s ² | | |
| Mass (Tolerance ±10%) | 600g | 750g | 1230g |

How to Order



Dimensions (Unit: mm)

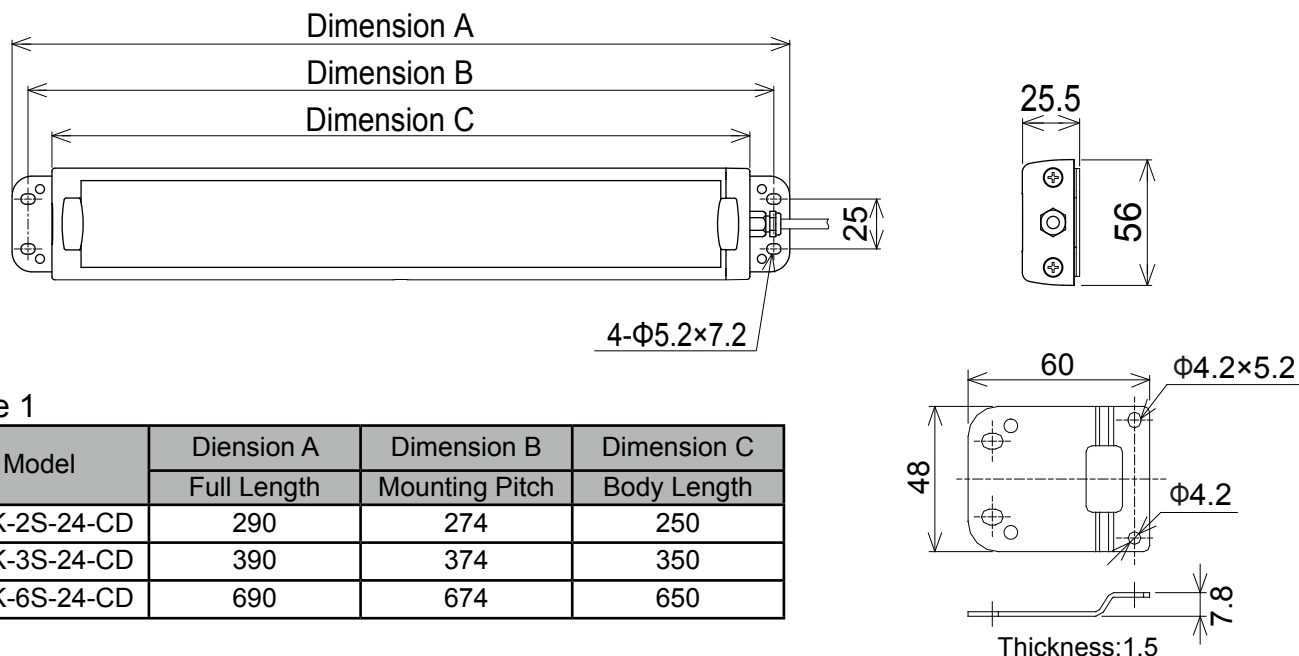
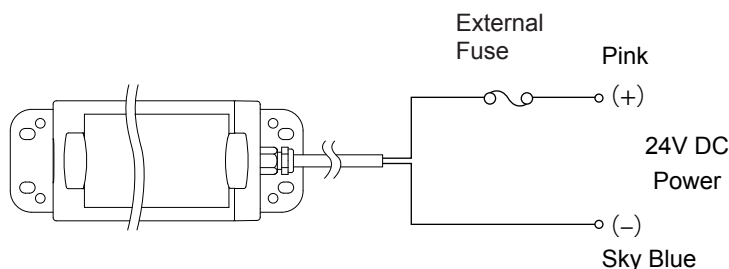


Table 1

| Model | Diension A | Dimension B | Dimension C |
|--------------|-------------|----------------|-------------|
| | Full Length | Mounting Pitch | Body Length |
| CWK-2S-24-CD | 290 | 274 | 250 |
| CWK-3S-24-CD | 390 | 374 | 350 |
| CWK-6S-24-CD | 690 | 674 | 650 |

Wiring



! [Enforced]

There is no protection rating for the area surrounding the tip of the cable.

To ensure insulation of water intrusion, the use of fillers (such as silicon, etc.) to plug up the tip part is recommended.

Oil Exam

It has passed the oil resistant test from the following common cutting oils.

| Company | Oil Type |
|-------------------------------------|---------------------------|
| Hangsterfer's | Hangsterfer's S-500 |
| Yushiro Chemical Industry Co., Ltd. | Yushiroken Synthetic #663 |
| Castrol | Syntilo 9954 |
| BlaserSwisslube Inc. | Blasocut BC35LFSW |

Confirmation in result of swelling, contraction, dissolution, exfoliation, separation, cracks, and discoloration by the accelerated impregnation examination with the oil types indicated in the table on the left for diluted oil at 55°C for 240 hours (ten days) was made.

Due to the additive agents in oil, the application of oils other than the ones mentioned may influence physical properties, therefore, please inquire in advance.

* The mentioned company names, product names, trademarks, etc. are the registered trademarks or trademarks in Japan for each company, and/or other countries.

Standard Accessory

These brackets are included.

■ Mounting Brackets



Options

The following brackets can be used to fit various mounting applications.

■ Angle-adjustment Brackets



■ Surface-mount Brackets



NE-M1-CL7

LED Dome Signal Light



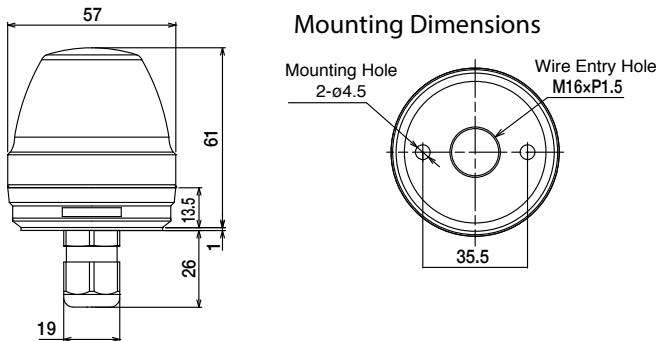
- LED
- IP66/67
- Φ57
- NPN/PNP
Open-collector

NE-M1-CL7 Series LED Dome Signal Light; One Signal Light with 7 LED color combinations provide multiple solutions with years of maintenance-free operation.

FEATURES

- Seven multicolored LEDs.
- Low power consumption to increase energy efficiency.
- High protection rating for outdoor use.
- Color-coded wires for easy wiring.
- Applications are suitable for AGV units, small tooling machines, control panels, etc.
- One unit can make colors in Red, Yellow, Green, Blue, Light Blue, Purple and White.
- Has the CE mark and conforms to the requirements for the EC directive.

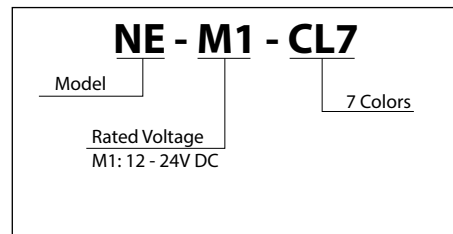
Dimensions (Unit: mm)



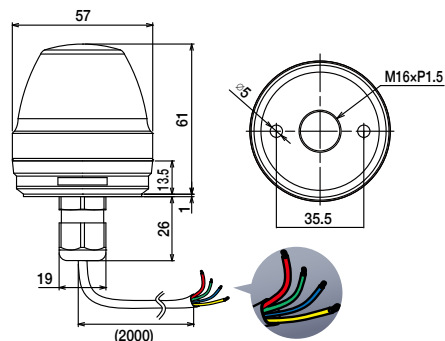
Specifications

| Model | Rated Voltage | Operating Temperature Range | Operating Humidity | Protection Rating | Mass |
|-----------|---------------|-----------------------------|--------------------|-------------------|------|
| NE-M1-CL7 | 12 - 24V DC | -30 C - +50 C | 90% or less | IP66/IP67 | 55g |

How to Order



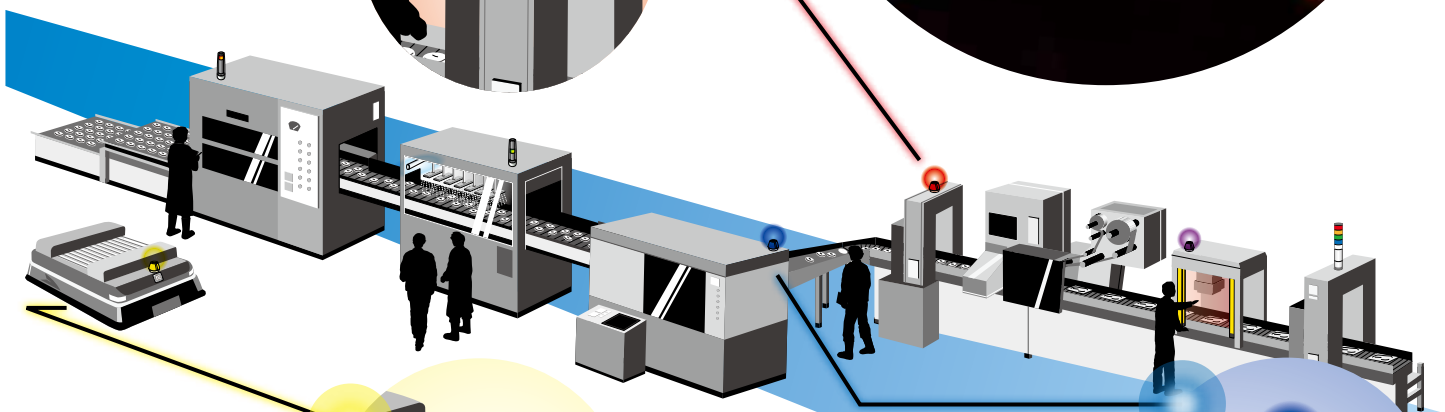
Wiring



Application Examples

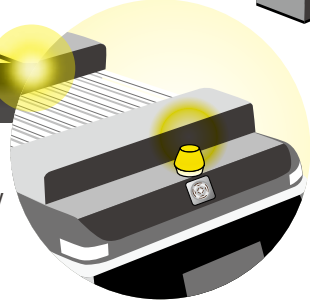
Conveyor Line

- Emergency Stop
- Error
- Operating
- Material Jammed
- Inspection
- Call Supervisor
- Ready to Start



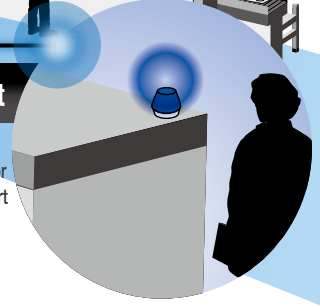
AGV

- Error
- Obstacle Detected
- Forward
- Reverse
- Turn
- Idle
- Dead Battery



Compact Equipment

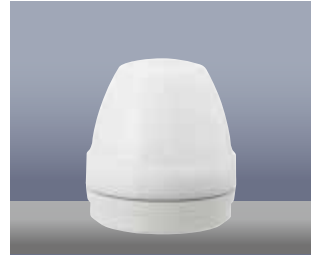
- Emergency Stop
- Error
- Operating
- Out of Material
- Idle
- Call Supervisor
- Ready to Start



Diverse Color Possibilities



Compact Size



A compact design to fit with any piece of equipment.

Opaque Lens



The white colored lens displays various colors much clearer and uniformly diffuses the light source.

Environmental Resistant Characteristics



High Protection for an IP rating of 66 and 67, it can be used in environments with higher humidities and dust exposure.

| Color Chart | |
|----------------|------------|
| Wiring | LED Color |
| RED | RED |
| GREEN | GREEN |
| BLUE | BLUE |
| RED/GREEN | YELLOW |
| BLUE/GREEN | LIGHT BLUE |
| RED/BLUE | PURPLE |
| RED/GREEN/BLUE | WHITE |

| | |
|-----------------------------|--------------------------------------|
| Model Name | NE-M1-CL7 |
| Rated Voltage | 12V DC~24V DC |
| Operating Voltage Range | 10 V DC~30 V DC |
| Operating Temperature Range | -30 °C to + 50°C (90% RH or less) |
| Protection Rating | IP66/IP67 |
| Display Color | 7 Colors |

BSV-L

Voice Annunciator



87 dB at 1m

15 Channels (Binary)

520 Seconds

IP54

□ 75

NPN/PNP
Open-collector



Now more playback time for longer, or more messages.

FEATURES

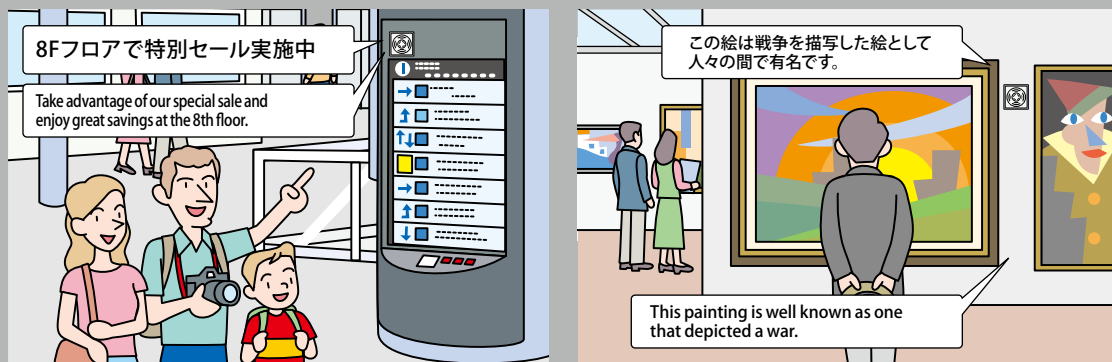
- Sound reduction
- Use the SD card to change messages while out in the field or set up modes for the right application.
- It complies with Europe's environment-friendly RoHS Directivem, conforms to the CE requirements and UL Listed.
- Can be used with transistor driven inputs. (Either NPN or PNP)
- A compact design with only a thickness of 19.9mm.
- Two installation choices of panel or wall mount with a Protection Rating of IP54 (Only for front panel mount attachment).
- The volume control is accessible from the front with maximum output of 87dB (at 1m).

Use it for multilingual messages

- Scene: Stores, Hotels, public transportation, tourist resort spots
- Application: Announce Events, Emergency Service, Museums, etc.

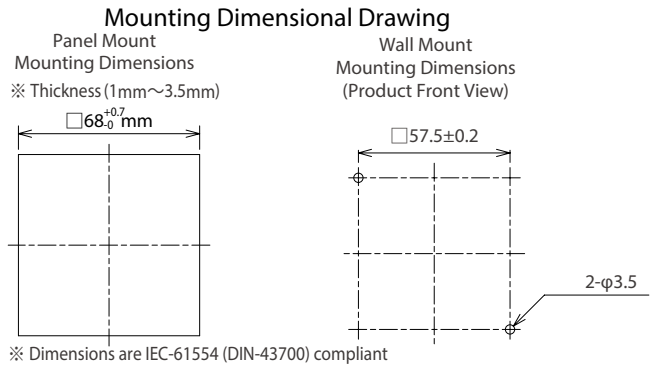
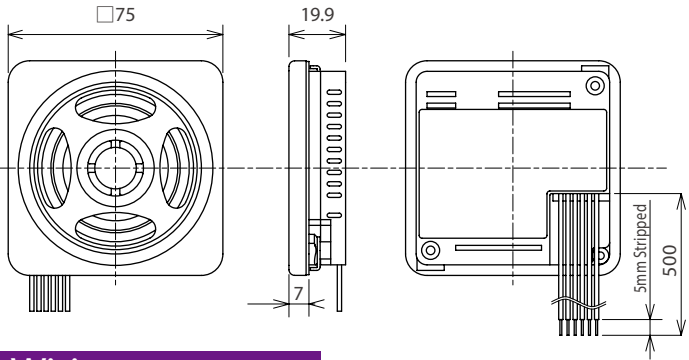


With a four-language playback, it gives 4 times as many messages.

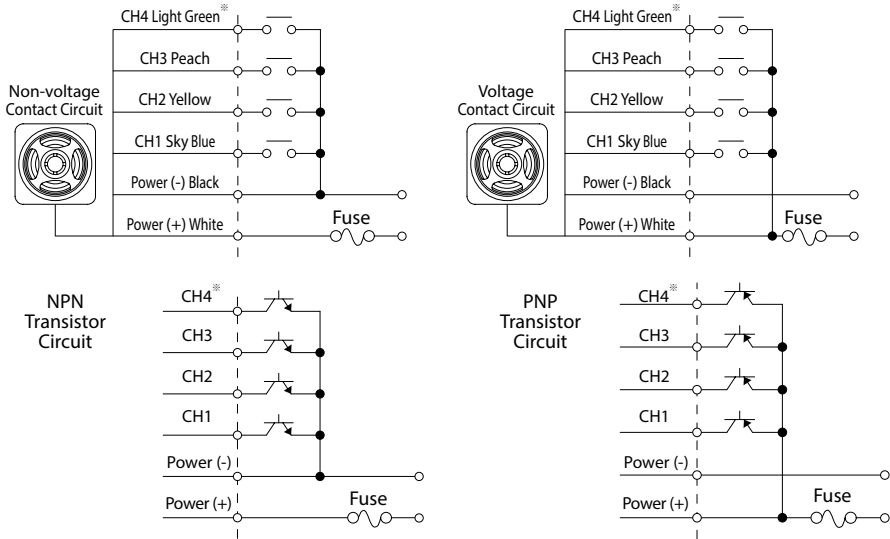


The support for multilingual communication is increasing due to the improvement in service at commercial establishments, such as for transportation, tourist resort, etc. and the audio assistance has been increased by more languages, such as Japanese, English, Chinese and Korean; therefore about 4 times the amount of playback time is needed. With the BSV-L model, a maximum of 520 seconds in playback is easy to support several multilingual messages.

Dimensions (Unit: mm)



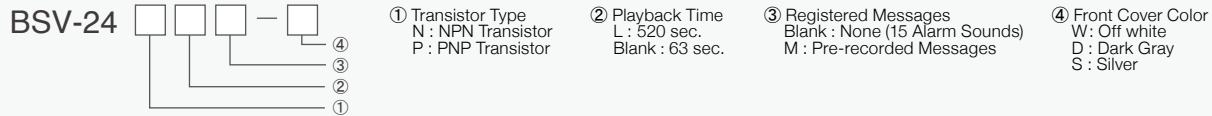
Wiring



Specifications and How to Order

■ 520sec. Model

| Specifications | | | | | | | | | | | | | | | | | | | | | |
|----------------|-----------------|---------------|-------------------------|-------------------|-------------------------------------|---------------------------------|--------------------|---|---|-----------|----------------------------------|------------------|------|-------------------------------------|---------------------------------|---------|---|---|-----------|----------------------------------|-------|
| Model | Transistor Type | Rated Voltage | Operating Voltage Range | Power Consumption | Sound Level | Operating Temperature Range | Max. Playback Time | Playback Channels | Protection Rating | Mass | Front Cover Color | Recorded Data | | | | | | | | | |
| BSV-24NLM-W/D | NPN Transistor | DC 12-24V | DC10.8V to 26.4V | 3.5W | Max. 87dB (at 1m) 1kHz Sine Wave | -10°C to +50°C (RH 85% or less) | 520sec. | 4 (Bit Input) 15 (Binary Input) ※When using the Sound Reduction Function, the inputs become: 3 (Bit Input) 7 (Binary Input) | IP54 (Only for Panel Mount in the Upright Position) In accordance with IEC 60529 | 100g ±10% | Off white (-W) Dark Gray (-D) | Voice | | | | | | | | | |
| BSV-24NLM-S | | | | | | | | | | | Silver (-S) | | | | | | | | | | |
| BSV-24NL-W/D | | | | | | | | | | | Off white (-W) Dark Gray (-D) | Alarm | | | | | | | | | |
| BSV-24NL-S | | | | | | | | | | | Silver (-S) | | | | | | | | | | |
| BSV-24PLM-W/D | PNP Transistor | | | | | | | | | | DC 12-24V | DC10.8V to 26.4V | 3.5W | Max. 87dB (at 1m) 1kHz Sine Wave | -10°C to +50°C (RH 85% or less) | 520sec. | 4 (Bit Input) 15 (Binary Input) ※When using the Sound Reduction Function, the inputs become: 3 (Bit Input) 7 (Binary Input) | IP54 (Only for Panel Mount in the Upright Position) In accordance with IEC 60529 | 100g ±10% | Off white (-W) Dark Gray (-D) | Voice |
| BSV-24PLM-S | | | | | | | | | | | | | | | | | | | | Silver (-S) | |
| BSV-24PL-W/D | | | | | | | | | | | | | | | | | | | | Off white (-W) Dark Gray (-D) | Alarm |
| BSV-24PL-S | | | | | | | | | | | | | | | | | | | | Silver (-S) | |



With the built-in SD card slot, MP3 data rewriting can be done with an SD card. In addition, rewriting or editing MP3 data files is possible with or without the exclusive PATLITE Playlist Editor 2 Application software.

Options

PATLITE Playlist Editor 2 (Free Download)

SD Card (2 GB) SDV-2GP

(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.

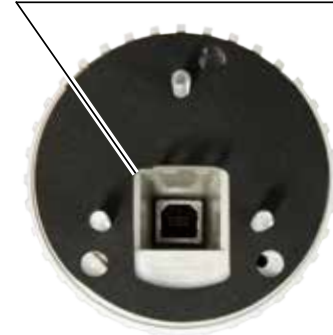
LU7-USB



Signal Tower



USB connector (Type B)



[Bottom View]
(USB Cable Not Included)

- LED
- 80dB at 1m
- IP65
- Ø70
- USB

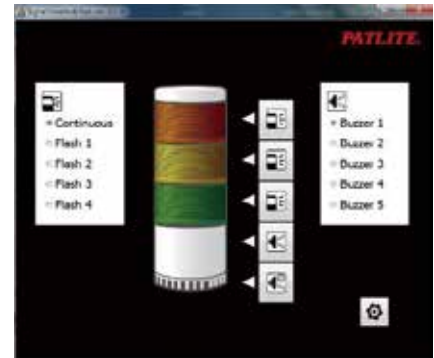
USB powered Base Module with Integrated Alarms

FEATURES

- USB Bus Power - no power supply needed
- DLL Operable
- Supports a maximum of five tiers where three tiers can be lighted simultaneously
- Complies with CE/RoHS/FCC/CK Standards
- IP65 protection rating
- Adjustable alarm frequency
- Two levels of adjustable alarm sounds
- Sound pressure at a maximum of 80dB
- Four kinds of flashing patterns
- 13 variable alarm frequencies and five alarm sound patterns
- Vinyl strip to secure USB cable included (Cable not included)
- Supports Windows 7 and Windows 8 Operating Software

Free Downloadable Software

The Controllable Program is downloadable from the PATLITE website (<http://global.patlite.com/>)



How to Order

Short Base Unit

LU7 - 02S - USB

Model: LU7 - 02S - USB

Rated Voltage: 02: DC 24V

Base Color: Blank: Ivory White, K : Black

LED Module

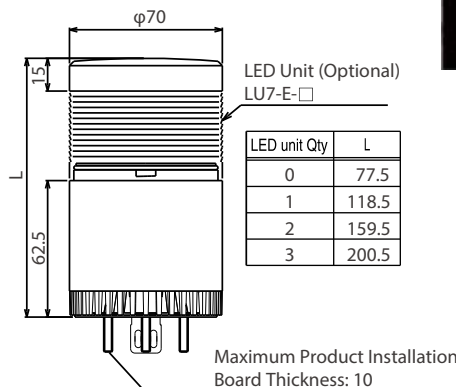
LU7-E-R

Model: LU7-E-R

Unit: E : LED Unit

Color: R: Red, Y: Amber, G: Green, B: Blue, C: White/Clear

Dimensions (Unit: mm)



Application Example

Printing Machines





LU7-LB

LU7-LB

Signal Tower



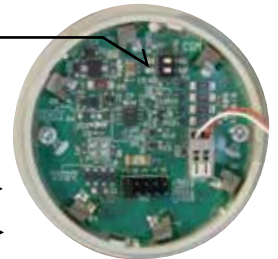
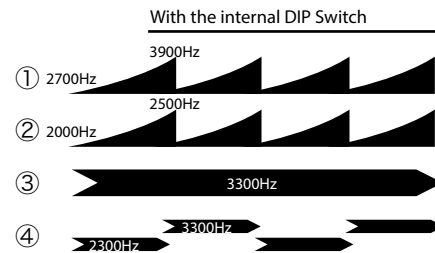
- 4 Sounds
- 100dB at 1m
- IP40
- Ø70
- NPN
Open-collector

Loud, multi-sound Module (LU7-LB)

FEATURES

- Loud sound pressure up to 100dB (±5dB)
- Four kinds of alarm sounds can be selected with a DIP switch for a wider alarm sound range
- IP40 Protection rating
- Complies with CE/RoHS/FCC Standards
- Can be used with LU7-02(FB), LU7-M2(FB), and LU7-02S(B)
- Alarm can be set to sound with a specific LED module for simultaneous control

4 Alarm sound Patterns



How to Order

LED Sound Module
LU7-LB

Model Unit
 LB: Alarm Module

Stackable audible alarm

- Can be used with LU7-02(FB), LU7-M2(FB), and LU7-02S(B).
- Easily mounted at the top of the light stack.

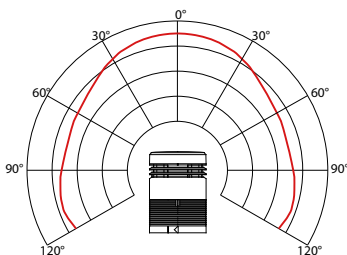
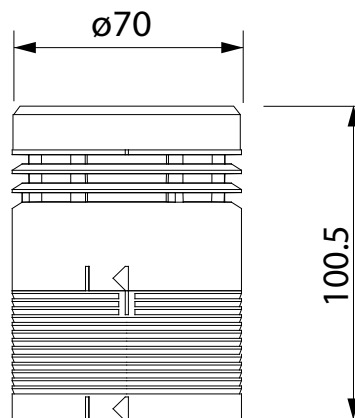


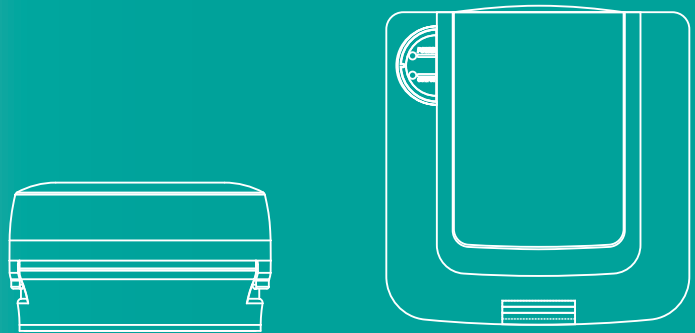
Diagram 1. Sound Direction

Dimensions (Unit: mm)

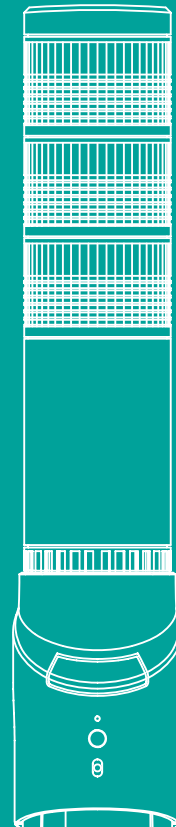


Specifications

| Model | Type | Rated Voltage | Rated Current | Power Consumption | Mass |
|--------|-------------|---------------|---------------|-------------------|------|
| LU7-LB | Alarm Sound | DC 24V | 150mA | - | 140g |



Network Products



NHL

Network Monitor Signal Tower



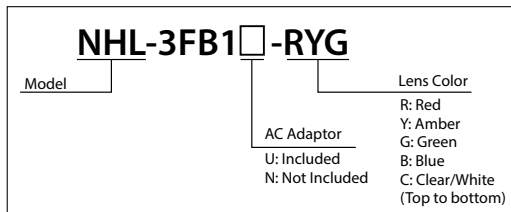
- LED
- 4 Alarm Sounds
- 80db at 1m
- Φ60
- Network

Network Monitoring With a New Look

FEATURES

- Not dependent upon the OS.
- Supports common protocols such as HTTP, SMTP, SNMP and includes RSH.
- Easily works with NMS (network management/integration / monitoring) software, etc.
- Easily controllable by the SNMP SET command and RSH commands.
- Conforms to the CE requirements. (AC Adaptor does not carry the CE mark.)
- Four different alarm sounds can be correlated to match the prioritized monitoring level.
- Contains the ICMP protocol so PING monitoring can be set up for a maximum of 24 nodes.
- Using the IP Address of the NHL Tower, detailed setup functions can be accessed via a browser.

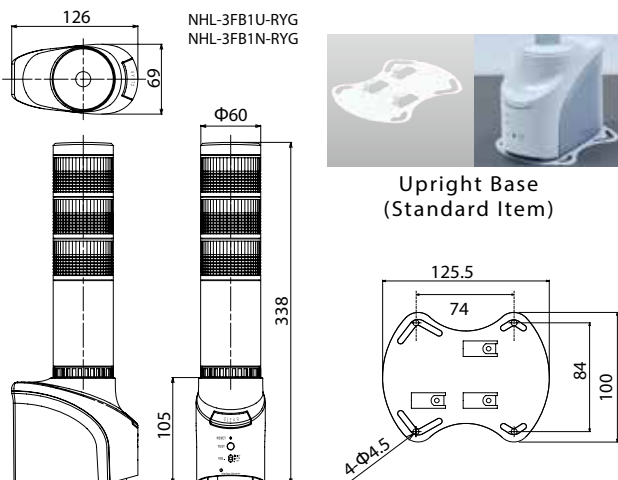
How to Order



Specifications

| Model | | NHL-3FB1U-RYG | NHL-3FB1N-RYG | | | | | |
|---|-------------------------|---|---------------|-------|--|------|-------|--------|
| AC Adaptor | Rated Voltage | AC 100V to 240V | - | | | | | |
| | Operating Voltage Range | AC 90V to 264V | - | | | | | |
| Main Unit | Rated Voltage | DC 24V | | | | | | |
| | Power Consumption | Unit | Red | Amber | Green | Blue | White | Buzzer |
| | | 2.0W | 1.5W | 1.5W | 0.8W | 0.8W | 0.8W | 2.0W |
| Operating Temperature Range | | 0°C - +40°C | | | | | | |
| Storage Temperature Range | | -10°C - +60°C | | | | | | |
| Relative Humidity | | RH of 20 to 80% (No Condensation) | | | | | | |
| Vibration Resistance | | 19.6m/s ² | | | | | | |
| Protection Rating | | IP20 (Not Waterproof) | | | | | | |
| Alarm Sound | Audio Level | Three-position switch for "HIGH", "LOW", "OFF" "HIGH": 80dB or more "LOW": 70dB or less (Tested at 1m from diaphragm in upright position) | | | | | | |
| | Tone Pattern | Four distinctive patterns: (Slow Intermittent), (Fast Intermittent), (Fast Burst), (Continuous) | | | | | | |
| Switches | "CLEAR" | Pushbutton Switch | | | | | | |
| | "TEST" | Pushbutton Switch | | | | | | |
| | "RESET" | Pushbutton Switch | | | | | | |
| | "BUZZER" | Slide Switch | | | | | | |
| Communication Method | Ethernet | Physical Layer: 10BASE-T/100BASE-TX (Auto-negotiation/Full Duplex/ Half Duplex) | | | | | | |
| | | Data Link Layer: CSMA/CD | | | | | | |
| | | Network Link Layer: IP / ARP / ICMP | | | | | | |
| | | Transport Layer: TCP / UDP | | | | | | |
| Application Layer: HTTP / RSH / SMTP / SNMP / POP / DNS / NTP / DHCP / Socket | | | | | | | | |
| Mounting | Location | Indoors Only | | | | | | |
| | Direction | Desktop or Wall-mount in the Upright Position | | | | | | |
| Mass | | 800g (AC Adaptor not included) | | | | | | |
| Accessories | | AC Adaptor, Rubber Feet, Adhesive Tape, Support Base | | | Rubber Feet, Adhesive Tape, Support Base | | | |

Dimensions (Unit: mm)



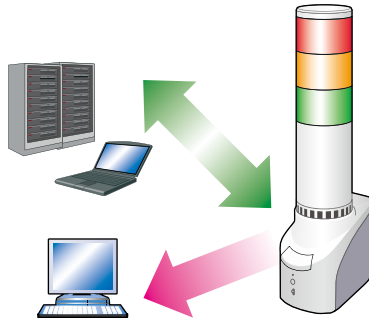
Easy Integration for many system applications

PING Device Monitor

Monitors Device Existence on the Network

The NH Tower initiates PING interaction with network devices to verify existence of up to 24 nodes. When the response to a PING fails, a warning with light and sound occurs to alert administrators.

Among the 24 nodes, 12 nodes (13th - 24th) can be set up for more detailed monitoring parameters.



Application Monitor

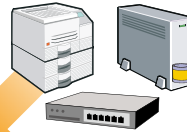
The tower can monitor important background applications and signal the administrator upon any failure.

SNMP v1-v2c

Monitor networking equipment at a low cost

Many network devices (UPS, printers, routers, switches, etc.) generate SNMP TRAP messages when a failure occurs. The NHL tower can trigger a light and sound signal based on these SNMP TRAP messages to alert the administrator.

It can distinguish the various TRAPS. Register up to 16 groups (4 nodes per group).



Easy setup from a web browser

Detailed tower setup is accessed from a web browser directly to its IP Address. Firmware can also be upgraded remotely.

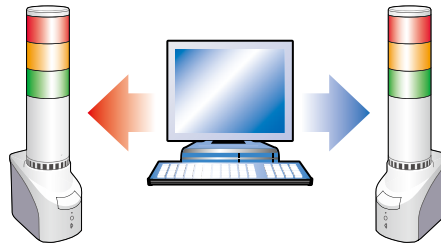


Web Setup Screen

Communication Commands for many customized applications

RSH

The RSH protocol is flexible with easily controllable commands. With the use of Network integrated management software; event information obtained from various monitoring tools etc., can be used as a trigger to cause a combination of flashing and alarm patterns to sound in synchronicity with the event.



Event Occurrence: Command Tier to light, alarm to sound.

RSH Example Code: rsh 192.168.10.1 -l root alert 111001

SOCKET Transmission

PHN Command Compatibility

Controlled with 2 byte commands.
 * Compatible with NHE-3FB, NHC-3FB, NHM-3FB, and PHN-3FBE1.
 * Some functionality is limited.

Event Occurrence: Command Tier to light, alarm to sound
 PHN Example Code: 0x57,0x17

New PNS Command Compatibility

The PNS command can be used to control all pattern information.
 * **The PNS command is a unique command from PATLITE.**

Event Occurrence: Command Tier to sound alarm

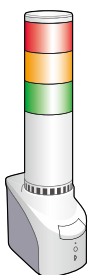
PNS Example Code:
 0x58,0x58,0x53,0x00,0x00,0x06,0x01,0x01,0x01,0x00,0x00,0x01

Diagnostic / Reporting/ Notification Features

E-mail Transmission

Send e-mail with a maximum of eight selectable events

Up to eight events can be created and sent as a secure e-mail with the subject name and text corresponding to the event.



SNMP v2c

SNMP TRAP Transmission

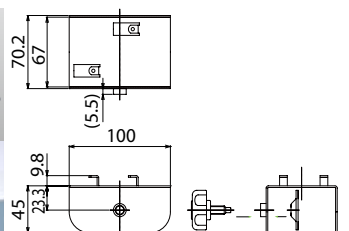
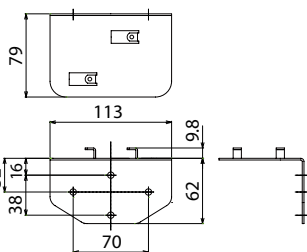
Can transmit from a maximum of eight network devices.

Self-diagnosis



The test switch on the front of the Body can check the Signal Tower and alarm operation functions easily without it being controlled through the network.

Options



PHC-100A

Interface Converter



Network

Terminal

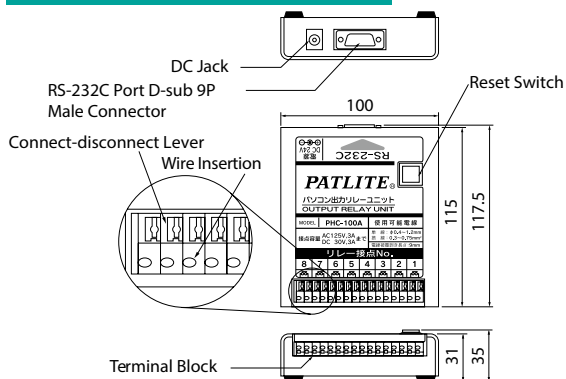
• This product requires the knowledge to program with ASCII commands to output through an RS-232C port.

The PHC-100A Interface Converter can be connected to the RS-232C port on your programmed PC to control most PATLITE products, both visual and audible.

FEATURES

- 16 terminals provide 8 isolated non-voltage contact outputs.
- Reset pushbutton provided to reset all outputs to the off state.

Dimensions (Unit: mm)

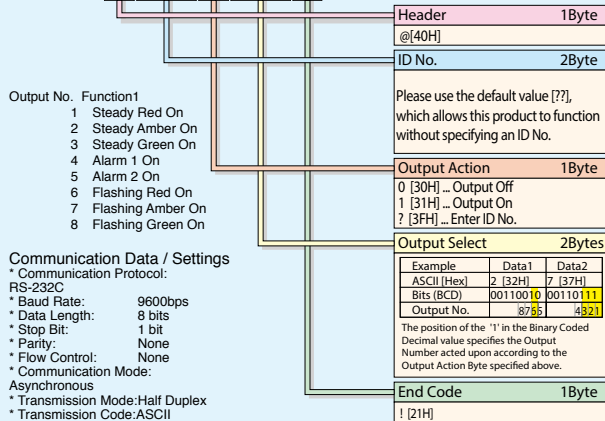


Specifications

| Model | | PHC-100A |
|---------------------------------------|-----------------------------|--|
| Communication Protocol | Interface | RS-232C (Based on EIA) |
| | Method | Half-duplex, Full-duplex, Asynchronous |
| | Baud Rate | 9,600 bps |
| | Data Bit | 8 bit |
| | Stop Bit | 1 bit |
| | Parity Bit | None |
| | Flow Control | None |
| PHC Base Terminal Buss Specifications | I/O Port | D-sub 9 pin Male Connector |
| | Contact Type | Non-voltage Contact |
| | Contact Outputs | 8 |
| | Output Load Capacity | AC 125V 3A / DC 30V 3A |
| PHE Base Specifications | Connector | Screwless Terminal |
| | Applicable Wire Size | Solid Wire: AWG18 - 26 (0.4 - 1.2mm ²) Stranded Wire: AWG20 - 22 (0.3 - 0.75mm ²) |
| | Dimensions (mm) | 100(W) x 31(H) x 115(D) |
| PHE Base Specifications | Power Supply Source | AC Adaptor (Sold Separately) |
| | Power Consumption | 4.0W |
| | Operating Temperature Range | 0°C to +40°C |
| | Humidity | 20 to 80% RH (No Condensation) |

PHE-3FBE1 / PHC-100A Control • ASCII Command String

@ ? ? 1 2 7 !



• The above example shows how to turn on the following output numbers : 6, 3, 2, 1



PHE-3FBE1

RS-232C / PC Controlled Signal Tower



- LED
- 2 Alarm Sounds
- 85dB at 1m
- Ø40
- Network

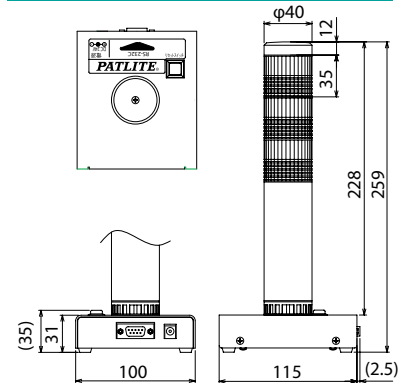
• This product requires the knowledge to program with ASCII commands to output through an RS-232C port.

Signal Tower can be controlled directly by PC through RS-232C.

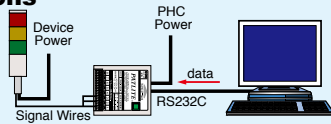
FEATURES

- Alarm is adjustable up to 85dB at 1m
- High-volume alarms (two patterns) can be heard even in a noisy factory.
- Bright LED signal tower
- PATLITE's original double reflection system with its exclusive hybrid prism-cut lens and 3 color LED modules create distinctive illumination that is bright and even.
- Light and alarm functions can be turned off by pressing the reset switch on the base.

Dimensions (Unit: mm)



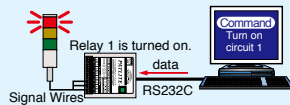
• Basic Connections



• Application Examples

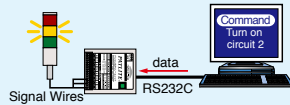
Transfer data to turn on relay circuit 1 from PC.

Data @??101!



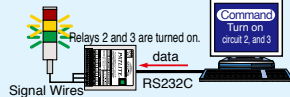
Transfer data to turn on relay circuit 2 from PC.

Data @??102!



Transfer data to turn on relay circuits 2 and 3 from PC.

Data @??106!



Specifications

| | Model | PHE-3FBE1 |
|-----------------------------|-----------------------------|---|
| Communication Protocol | Interface | RS-232C (Based on EIA) |
| | Method | Half-duplex, Full-duplex, Asynchronous |
| | Baud Rate | 9,600 bps |
| | Data Bit | 8 bit |
| | Stop Bit | 1 bit |
| | Parity Bit | None |
| | Flow Control | None |
| Signal Tower Specifications | I/O Port | D-sub 9 pin Male Connector |
| | Flashing Rate | 60 flashes per minute |
| | Sound Level | Adjustable from 70dB to 85dB (at 1m) |
| PHE Base Specifications | Tone Pattern | 2 Alarms (Slow Intermittent, Fast Intermittent) |
| | Dimensions (mm) | 100(W) x 259(H) x 115(D) |
| | Power Supply Source | AC Adaptor (Sold Separately) |
| | Power Consumption | 6.5W |
| | Operating Temperature Range | 0°C to +40°C |
| | Humidity | 20 to 80% RH (No Condensation) |

PHU-3

USB / PC Controlled Signal Tower

LED



Ø25

IP20

Network

USB



Signal Tower can be controlled directly by PC through the USB Port.

FEATURES

- Bright LED available as RYG or RYB three-tiered Signal Tower.
- PATLITE's original double reflection system with its exclusive hybrid prism-cut lens and 3 color LED modules create distinctive illumination that is bright and even.
- Power source supplied by USB Buss Power.

How to Order

PHU-3-RYG

Color

RYG: (Red, Amber, Green)

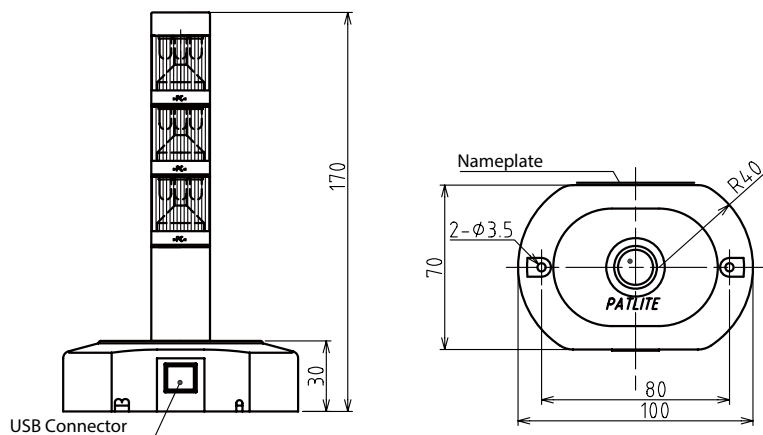
RYB: (Red, Amber, Blue)

(Top to bottom)

Specifications

| Model | | PHU-3-RYG | PHU-3-RYB |
|--------------|--|---|-----------|
| General | Rated Voltage | 5V DC (USB Buss Power) | |
| | Operating Voltage Range | DC 4.4V to DC 5.25V | |
| | Rated Current Consumption (Power Source) | Standby Mode: 25mA Operating Mode: 230mA Max. | |
| | Operating Temperature Range | -10°C to +55°C | |
| | Relative Ambient Temperature | RH 90% or less (No Condensation) | |
| | Electric Noise Intensity Level | VCCI Class-B Equivalent | |
| Signal Tower | Installation | Upright Position Only | |
| | Protection Rating | IP20 | |
| | Insulation Resistance | More than 1MΩ at DC500V between the terminals and Chassis | |
| | Withstand Voltage | AC 500V applied for 1 minute between the terminals and chassis without breaking insulation. | |
| | Mass | 0.18kg | |
| Interface | Input / Output | Input: USB / Output: Lighting (Red, Amber, Green, Blue LED) | |
| | Physical Specifications | Connector Input: Series-B Receptacle (USB Rev. 1.1 Compliant) | |

Dimensions (Unit: mm)



Example) PHU-3-RYG controlling Red and Green LED lights (*1)

• Logic Specifications

| Action | Bit Data |
|--|----------|
| "Red" Light ON | 00000001 |
| "Amber" Light ON | 00000010 |
| "Green" Light ON | 00000100 |
| "Blue" Light ON | 00001000 |
| "Red" and "Amber" Light ON; "Green" and "Blue" Light OFF | 00000011 |
| "Red" and "Green" Light ON; "Amber" and "Blue" Light OFF | 00000101 |
| "Amber" and "Green" Light ON; "Red" and "Blue" Light OFF | 00000110 |
| "Amber" and "Blue" Light ON; "Red" and "Green" Light OFF | 00001010 |
| "Red", "Amber", "Green" and "Blue" Light ON | 00001111 |
| "Red", "Amber", "Green" and "Blue" Light OFF | 00000000 |

• Transfer Mode

Bulk Transfer

• Data Error Detection Criteria

CRC (Cyclic Redundancy Check)

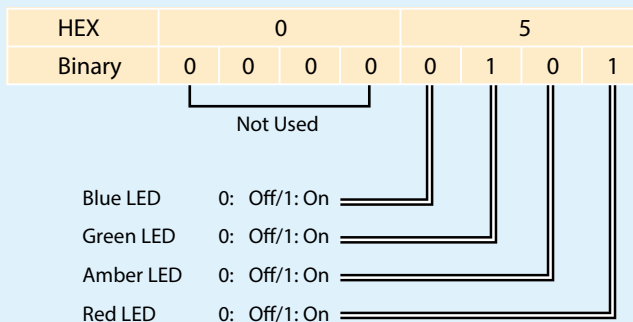
• Packet Commands

Token Packet (SOF, SETUP, OUT, IN)

Data Packet

Handshake Packet

| Transmission Setting (Virtual COM) | |
|------------------------------------|-------------|
| Bit Rate | : 19,200bps |
| Data Length | : 8 bits |
| Parity | : None |
| Stop Bit | : 1 bit |
| Control Flow | : None |



*2, *3

*1 Drivers for Windows OS may have to be installed prior to use. Refer to the Instruction Manual on how to get the latest downloads.

*2 This product does not include a flashing function, but it can be controlled by programming it through the USB output.

*3 The control commands for the Green LED and Blue LED for the PHU-3-RYG and PHU-3-RYB are controlled separately.

* This unit is designed to be controlled by one computer, improper operation may occur with two or more units connected.

VE25 / VE100

Real-time Production Monitoring Solution



VE25-304SU
3 Row, 4 Digit Type
Digit Size : 25mm



VE100-304SU
3 Row, 4 Digit Type
Digit Size : 100mm



VE-IRU
Infrared Remote Control Unit
(Sold Separately)

*Compliant with FCC Title 47, Part 15, Subpart B

- LED
- Terminal
- 25mm/100mm
- Network

- Improve Manufacturing Productivity
- Reduce Down Time for "Kaizen"
- Ideal for Lean Manufacturing
- Real-time Production Monitoring
- Large Digital Displays
- Easy Installation

Our VE Series Real-time Production Monitoring Solution serves as a rugged, factory floor Andon system, with real-time production status indication to alert product performance to workers and supervisors. The VE Series Real-time Production Monitoring Solution is easy to install directly on operator workstations or automated machinery, and the wireless remote control unit enables easy setup. The VE Series Real-time Production Monitoring Solution comes in 2 models (25mm or 100mm character height), and it fully supports the principles of "Kaizen" (continuous improvement) to achieve a "Visual Factory", where clear and easy to understand information is quickly accessible.

FEATURES

- Available in 25mm and 100mm digit sizes.
- Production-control settings can easily be set-up with the remote control or PC (Sold Separately).
- Bright LED digits for easy viewing.
- External terminal output for adding an extra 3 color LED Signal Tower to add distinctive signaling.

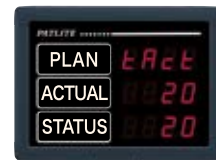
• Easy Setup



Plan



Prescale



Takt-time

• Three-terminal Output

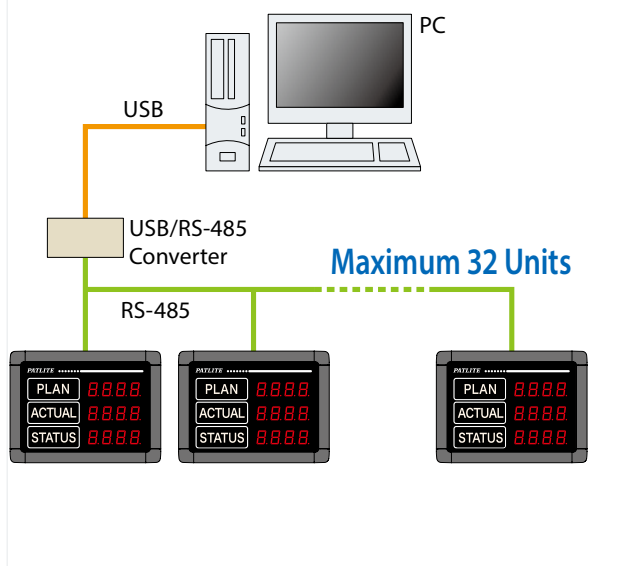


• Optional Bracket for VE-100 Available



VE-100 Brackets
(Set of 2, Sold Separately)

Serial Network Application



Stand-alone Application

Output Devices

- Beacons
- Audible Alarms
- Annunciators

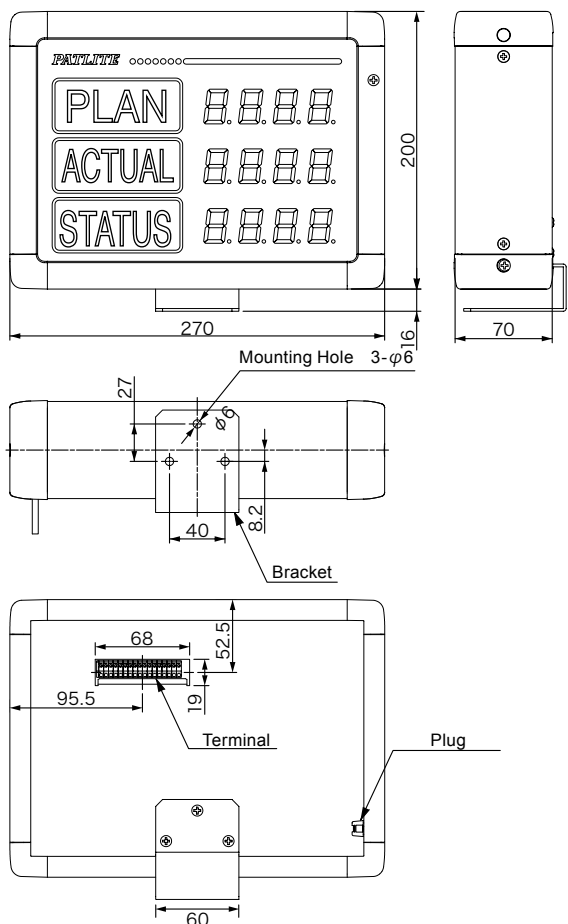
Input Devices

- Manual Switches
- Micro Switches
- Relays
- RS485 Converters

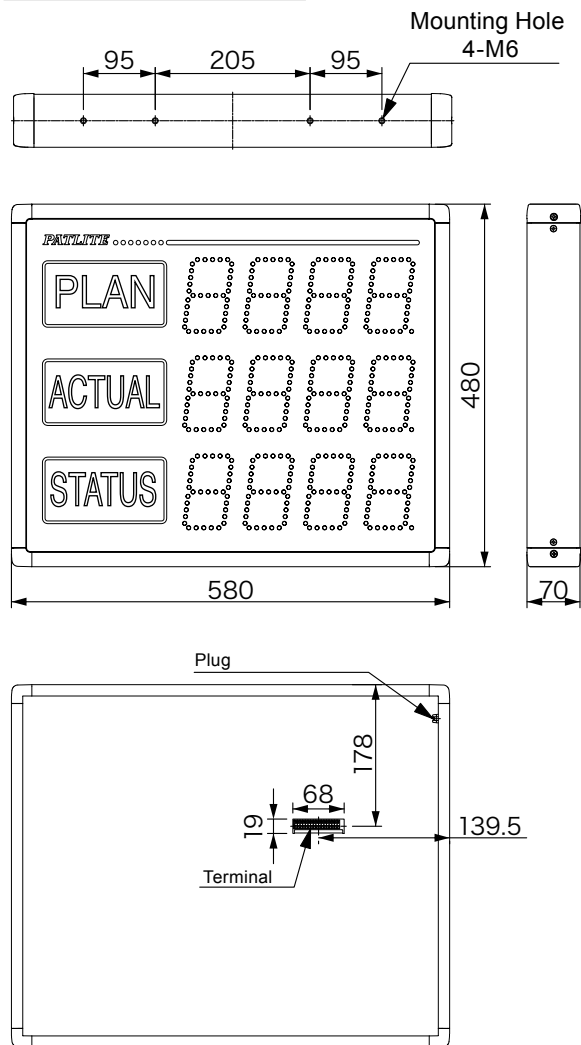


Dimensions (Unit: mm)

Model VE25-304SU



Model VE100-304SU



WD-Z2

Wireless Data Acquisition System



WDT-6M $\Phi 60$ Fits LME

WDT-5E $\Phi 50$ Fits LE

Wireless Network

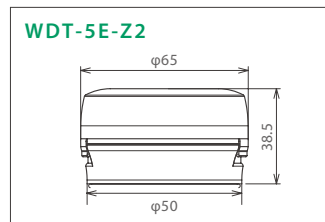
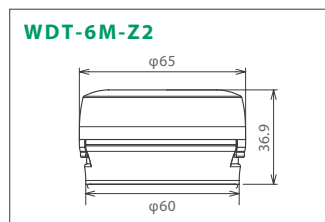
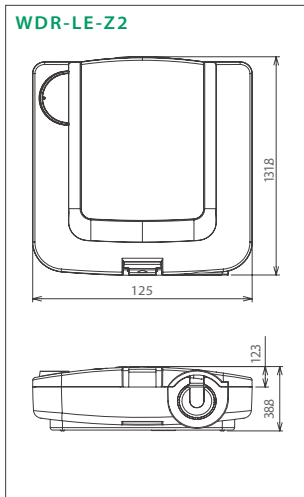
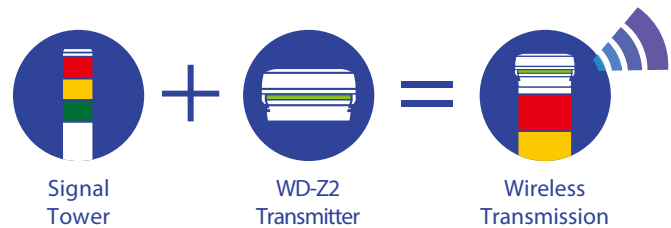


Monitor remotely and collect data wirelessly from a PATLITE Signal Tower

PATLITE wireless add-on modules and receivers make PATLITE Signal Towers capable of sending electrical signals over a wireless network to a data center. PATLITE wireless add-on modules and receivers are a uniquely practical and economical solution for data acquisition, machine status remote monitoring, and supervisory control of industrial processes. The WD-Z2 is an effective solution for lean manufacturing and a visual factory. PATLITE wireless add-on modules comply with IEEE802.15.4, operating in the 2.4 GHz band.

- 1) Simply add-on to a PATLITE Signal Tower
Operating conditions of Patlite signal towers installed on production machines or process systems can be transmitted wirelessly to a data center. Data acquisition and remote monitoring are possible instantly and economically through the WDR-Z2 receiver.
- 2) Wireless technology of today eliminates tedious wire installation
The WDT-Z2 add-on wireless modules tap their power from the PATLITE Signal Towers and transmit their electrical signals to the data center. This can reduce wiring, component installation and other related costs.
- 3) Multi-hopping topology and high transmitting reliability
With wireless multi-hopping, it minimizes potential transmitting failures or errors, adding a high level of stable operation and transmission reliability.

Dimensions (Unit: mm)

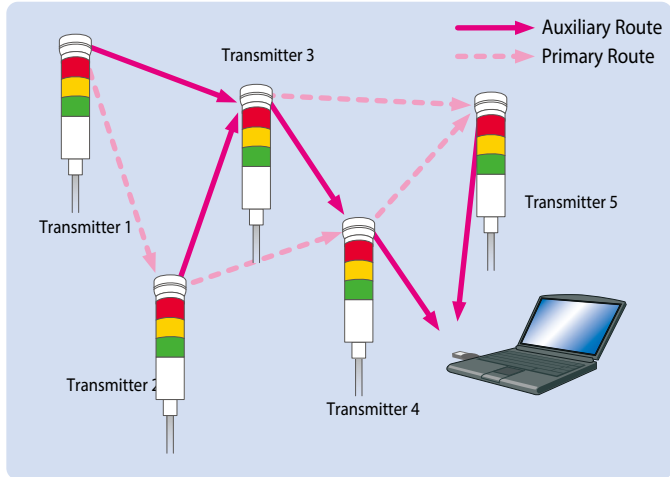
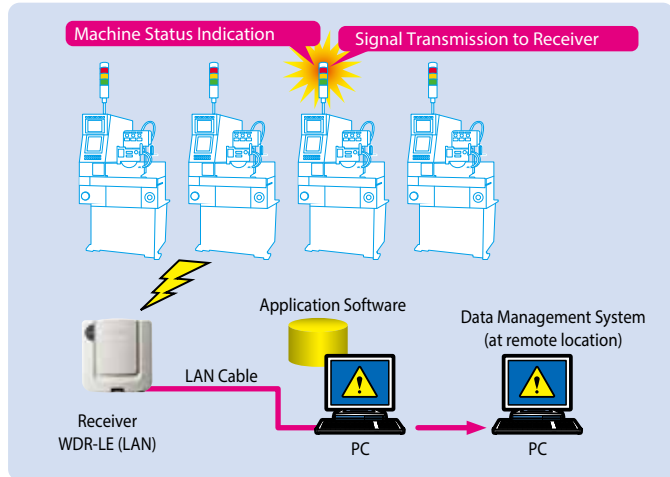


Typical Applications

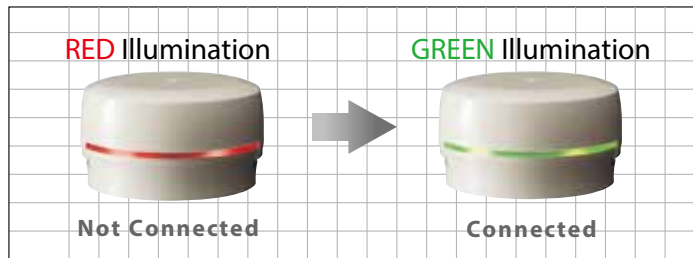
- Multiple stand-alone machines can be networked by the WD-Z2 for data archiving and remote monitoring.
- The status and condition of the machines are indicated by the PATLITE signal towers.

Wireless Concept IEEE 802.15.4 2.4GHz

- Wireless hopping/routing functions and mesh topology can make flexible and reliable wireless network configurations possible.
- Data archived by the WD-Z2 is stored in a file format CSV which any off-the-shelf data management software e.g, SCADA can handle.



Network Connection Condition



※ The transmitter is designed for PATLITE Model Series LME and LE Signal Towers. (As of Dec, 2012)

Transmitter Installation



Affix the transmitter adaptor **A** on the Signal Tower and fasten it with the center screw. Then simply attach the transmitter **B** to the bracket. (Some applications don't require additional wiring.)

Specifications

Transmitters

| Model | WDT-6M-Z2 | WDT-5E-Z2 |
|-------------------------|---|---------------|
| Applicable Signal Tower | Φ60 LME Series | Φ50 LE Series |
| Rated Voltage | DC 24V (No Polarity) | |
| Voltage Range | 20.4V - 26.4V DC | |
| Current Consumption | 35mA | |
| Operating Temperature | -10°C - +60°C (No Condensation) | |
| Storage Temperature | -20°C - +70°C (No Freezing) | |
| Relative Humidity | RH 85% or less | |
| Mounting Direction | Upright Position (Indoors Only) | |
| Protection Rating | Determined by PATLITE Signal Tower IP Ratings | |
| Dimensions (mm) | Φ65 x 36.9 | Φ65 x 38.5 |
| Mass | 55g | |

Ask your PATLITE Sales Representative for WD-Z2 compatible PATLITE Signal Towers

Receiver

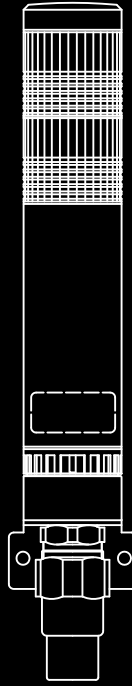
| Model | WDR-LE-Z2 (LAN/USB) |
|-----------------------|---------------------------------------|
| Rated Voltage | DC 24V (Power Supply not included) |
| Voltage Range | DC 20.4V - 26.4V |
| Current Consumption | 150mA |
| Operating Temperature | -10°C - +60°C (No Condensation) |
| Storage Temperature | -20°C - +70°C (No Freezing) |
| Relative Humidity | RH 85% or less |
| Mounting Direction | Horizontal, Wall-mount (Indoors Only) |
| Protection Rating | IP20 |
| Dimensions (mm) | 131(H)x125(W)x38.5(D) |
| Mass | 165g |

Features

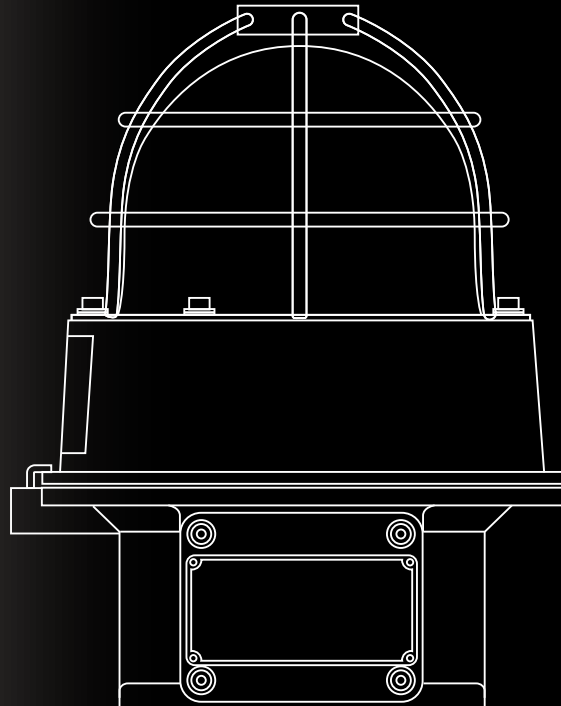
| | |
|------------------------|---|
| Wireless Standard | IEEE 802.15.4 for Zigbee 2.4GHz |
| Frequency Bandwidth | 2,400MHz - 2,483.5MHz (16 Channels at 5MHz Step starting from 2,405MHz) |
| Networking Connections | up to 20 Units (*1) |
| Antenna Output | Maximum 1mW |
| Compliances | Wireless Telegraph Law, Electrical Appliance and Material Safety Law (AC Adaptor), RoHS, CE (R&TTE), FCC, China, Indonesia, Taiwan, Thailand, Phillipines |

(*1) Number of possible Units to connect is based on the wireless environment and installation location

- * This product operates on a frequency in compliance to FCC laws in the United States and its territories. Radio Laws for individual countries vary, and it is, therefore, the responsibility of the customer to comply with the laws in the country which applies to the application. Our company takes no responsibility directly, or indirectly, for claims from a customer or third party regarding Radio Laws or Wireless ordinance.
- * This product requires application software for configuration and data acquisition. For more information on the latest software and solution to fit the application, please contact your nearest PATLITE Sales Representative indicated on the backside of this Catalog.



Explosion-Safe Products



AR-070

CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIC T85°C Dc IP65 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-Safe Signal Tower



LED



FEATURES

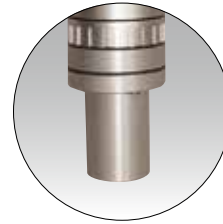
- Explosion-Safe for gas and dust
- Suitable for Zone 2 and Zone 22
- CE Compliance in accordance to ATEX
- Full and brilliant lumination
- LED double reflection lighting system
- Different lens colors available
- Stackable from 1 to 5 tiers
- Wall mount or direct mount
- Ingress protection of IP65 (IP54 with buzzer)
- Available with "flashing/ non-flashing" and two audible alarm sounds

85dB at 1m

IP65 (IP54 with Buzzer)

Explosion-Safe

Ø40



1/2" NPT

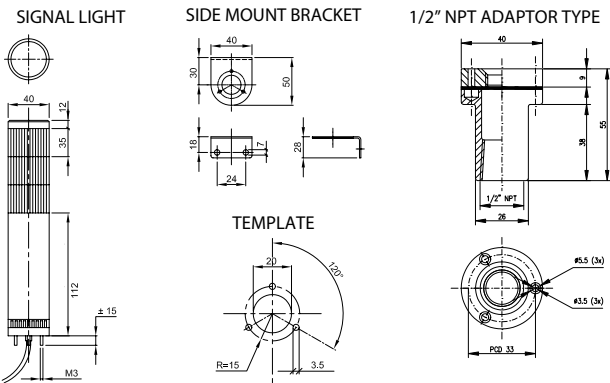
*1/2 NPT Adaptor also available



Side-mount Bracket

Explosion-Safe Signal Tower ø40mm with sealed cable

Dimensions (Unit: mm)



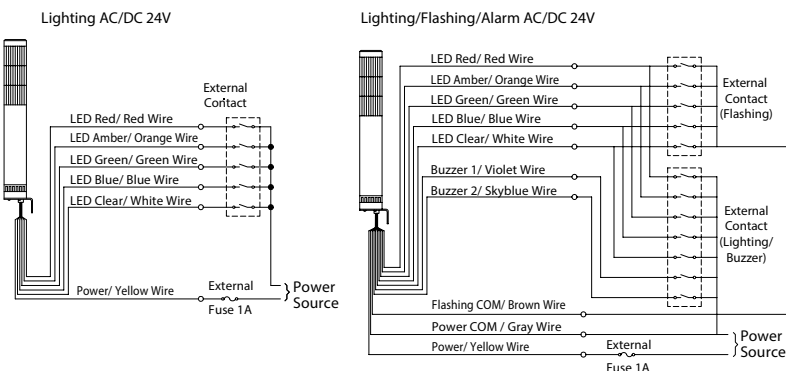
Specifications

| | |
|-------------------------|---|
| Explosion-safety | CE Ex II 3GD; Ex nA IIC T4 Gc; Ex tc IIIC T85°C Dc IP65 |
| CE Conformities | EN 60079-0, EN 60079-15, EN 60079-31 |
| Certification | EC Declaration of Conformity |
| Ambient Temperature | -30°C - +60°C |
| Ingress Protection | IP65 to EN 60529 |
| Material | ABS Tower Body |
| Lighting Source | Multiple LED's with Double Reflection System |
| Acoustical Source | Buzzer with two different tones: 85dB (at 1m) |
| Rated Voltage | AC/DC 24V |
| Assembly Position | As Desired |
| Activation Time | 100% |
| Module Colors Available | Red, Amber, Green, Blue, Clear/White |
| Cable | Factory sealed cable, ø8mm, length 3 meters |

CURRENT RATINGS

| LED | | BUZZER | |
|---------------------|--------------------|---------------------|----------------|
| Signal Line Current | | Signal Line Current | Inrush Current |
| Red, Amber | Green, Blue, Clear | ab. 40mA | ab. 250mA |
| ab. 30mA | ab. 25mA | | |

Wiring



How to Order

AR-070-0 1 / -RYGBC

| | |
|----------------------|----------------------|
| Model Code | LED Color |
| 1 : Continuous Light | R: Red |
| 2 : Flashing / Alarm | Y: Amber |
| | G: Green |
| | B: Blue |
| | C: Clear/White |
| | (From top to bottom) |
| Rated Voltage | Bracket Code |
| 1: AC/DC 24V | Blank : L Type |
| | N : NPT Type |
| Tiers | |
| 1: 1 Tier | |
| 2: 2 Tiers | |
| 3: 3 Tiers | |
| 4: 4 Tiers | |
| 5: 5 Tiers | |

※ AC type available by special order.



AR-078

AR-078

CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIC T85°C Dc IP65 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-safe Signal Tower



Side-mount Bracket



3/4" NPT

*3/4 NPT Adaptor also available

FEATURES

- Explosion-Safe for gas and dust
- Suitable for Zone 2 and Zone 22
- CE Compliance in accordance to ATEX
- Full and brilliant lumination
- LED double reflection lighting system
- Different lens colors available
- Stackable from 1 to 5 tiers
- Wall mount or direct mount
- Ingress protection of IP65 (IP54 with buzzer)
- Available with "flashing/ non-flashing" and two audible alarm sounds



LED

90dB at 1m

IP65 (IP54 with Buzzer)

Explosion-Safe

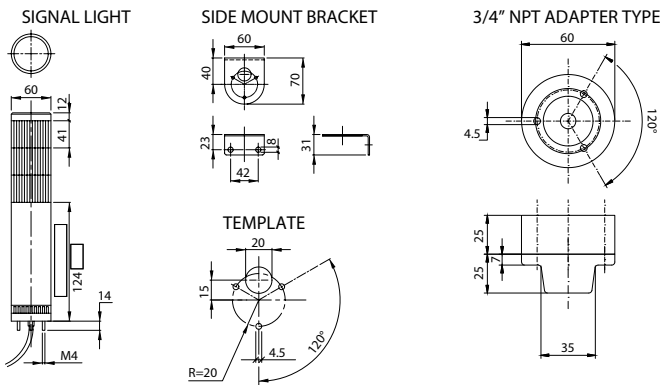
Ø60

Explosion-Safe Signal Tower ø60mm with sealed cable

Specifications

| | |
|-------------------------|---|
| Explosion-safety | CE Ex II3 GD; Ex nA IIC T4 Gc; Ex tc IIIC T85°C Dc IP65 |
| CE Conformities | EN 60079-0, EN 60079-15, EN 60079-31 |
| Certification | EC Declaration of Conformity |
| Ambient Temperature | -30°C - +60°C |
| Ingress Protection | IP65 to EN 60529 |
| Material | ABS Tower Body |
| Lighting Source | Multiple LED's with Double Reflection System |
| Acoustical Source | Buzzer with two different tones: 90dB (at 1m) |
| Rated Voltage | AC/DC 24V |
| Assembly Position | As Desired |
| Activation Time | 100% |
| Module Colors Available | Red, Amber, Green, Blue, Clear/White |
| Cable | Factory sealed cable, ø8mm, length 3 meters |

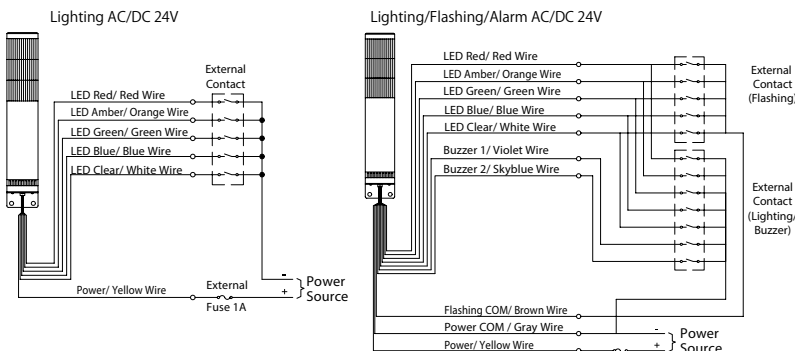
Dimensions (Unit: mm)



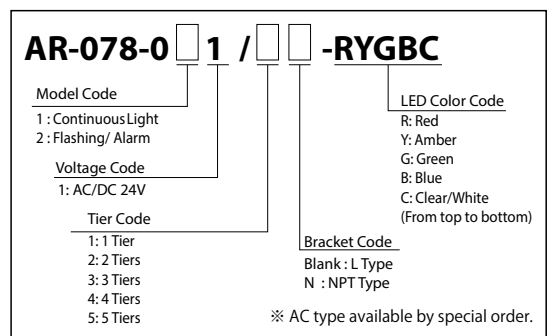
CURRENT RATINGS

| LED | | BUZZER | |
|---------------------|--------------------|---------------------|----------------|
| Signal Line Current | | Signal Line Current | Inrush Current |
| Red, Amber | Green, Blue, Clear | ab. 40mA | ab. 250mA |
| ab. 30mA | ab. 25mA | | |

Wiring



How to Order



LKEH-EX



CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIB T85°C Dc IP54 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-Safe LED Hybrid Signal Tower



LED



32 Channels (Binary)

63 Seconds

105dB at 1m

Explosion-Safe

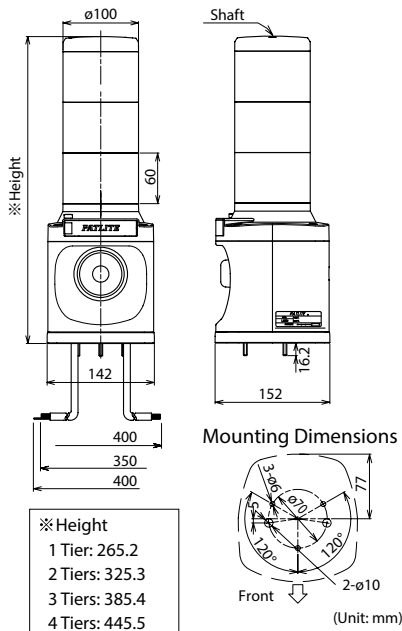
FEATURES

- Explosion-Safe for gas and dust
- Suitable for Zone 2 and Zone 22
- CE Compliance in accordance to ATEX
- LED brightness is visible from a far distance with a big 100mm diameter module
- Super-bright LED colors corresponding to different voice, alarm, chimes and melody sounds.
- Voice alert messages of up to 63 seconds (64kbit/sec) with 5 channels for playback.
- 32 different melody, chime sound combinations are pre-recorded
- 8 sounds can be played back with bit input, or 32 sounds with binary input
- Stackable from 1 to 4 tiers
- Adjustable volume from 0 to 105dB (at 1m)
- MP3 model is field-programmable, using an SD Card for model LKEH-FV-EX
- Robust design able to withstand vibrations of up to 2G.
- Body is made of Acrylonitrile-Ethylene-Styrene for weather resistance
- One common wire can easily control both LED Units and audible signals
- NPN open-collector connection is standard, PNP is available upon request



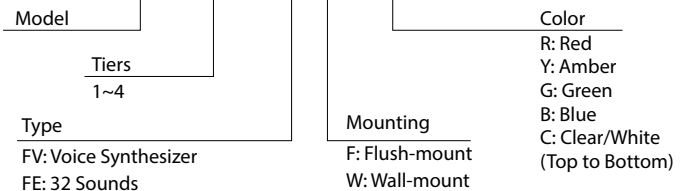
Dimensions (Unit: mm)

Model LKEH-FEW-EX, LKEH-FVW-EX



How to Order

LKEH-302FVF-RYG-EX



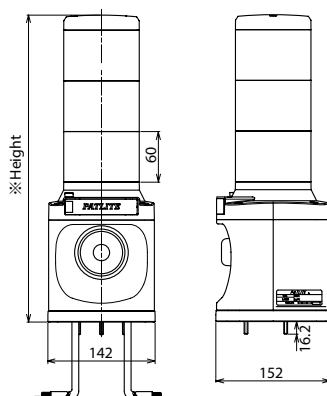
| Model | MP3 | Power |
|-------------------------|----------|-------|
| LKEH-FEF-EX/LKEH-FEW-EX | — | 14.2W |
| LKEH-FVF-EX/LKEH-FVW-EX | Supports | 14.2W |

SD Card (SDV-128) for models LKEH-FVF-EX and LKEH-FVW-EX is sold separately.

Sound Selection Chart

| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
|------------------------------|------------------|---------------------|-------------------------------|
| Stutter (rapid intermittent) | Melody Chime | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringling Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Galloping Hi-Lo | Ringling Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

Model LKEH-FEF-EX, LKEH-FVF-EX



Specifications

| Model | Rated Voltage | MP3, Melody | Operating Temperature Range | Recordable Duration | Mounting Brackets | Channels | Mass |
|-------------|---------------|---------------------------------|----------------------------------|---------------------|-------------------|-------------------------------------|-------|
| LKEH-FEF-EX | DC 24V | Type-E | -10°C to +50°C 85% RH or less | Pre-recorded | Flush-mount | 8ch bit input, 32ch binary input | 2.8kg |
| LKEH-FEW-EX | | Type-E | | | Wall-mount | 8ch bit input, 32ch binary input | 3.2kg |
| LKEH-FVF-EX | | MPEG1-Audio Layer III, 64kbit/s | | 63 seconds | Flush-mount | 5ch bit input, 32ch binary input | 2.8kg |
| LKEH-FVW-EX | | MPEG1-Audio Layer III, 64kbit/s | | | Wall-mount | 5ch bit input, 32ch binary input | 3.2kg |

• The mass is based on a 3-tiered LED Model LKEH. The mass will change in accordance to the number of tiers.



EHS-EX/EHV-EX

CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIC T85°C Dc IP65 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-Safe Melody/Alarm Horn



EHV 63 Channels (Binary)

110 dB at 1m (EHS)

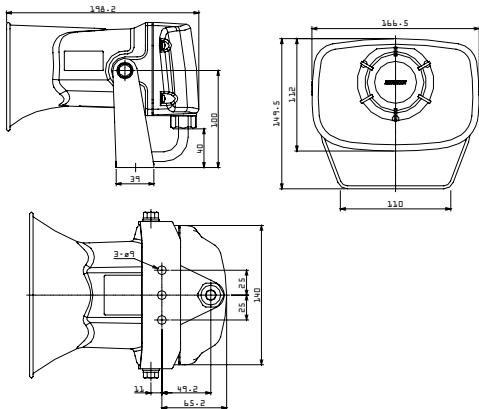
IP65

Explosion-Safe

FEATURES

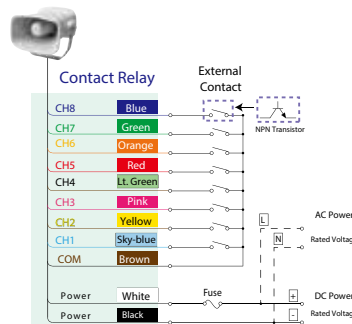
- Protection Rating of IP65.
- Explosion-Safe for gas and dust
- Suitable for Zone 2 and Zone 22
- CE Compliance in accordance to ATEX
- EHS-EX comes with 32 preloaded melody and alarm sounds with adjustable volume up to 110dB (at 1m).
- Robust, indoor and outdoor use with vibration resistance up to 4.5G.
- EHV-EX comes with 63 preloaded crisp and clear melody and alarm sounds with adjustable volume up to 110dB (at 1m).
- EHV-EX offers a field-programmable MP3 function with a maximum of 220 sec. of recording time (at 64bps) and an adjustable volume up to 105dB (at 1m).
- Ideal for plant-wide notification, public address and process control.
- UL464, CSA-C22.2 NO.205-M1983, FCC Part 15 Subpart B Class 4.
- CE, RoHS Compliant (EHS-M1 and EHV-M1 Only).

Dimensions (Unit: mm)

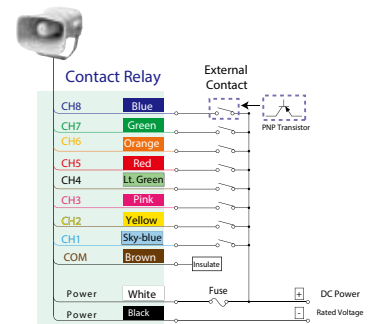


Wiring

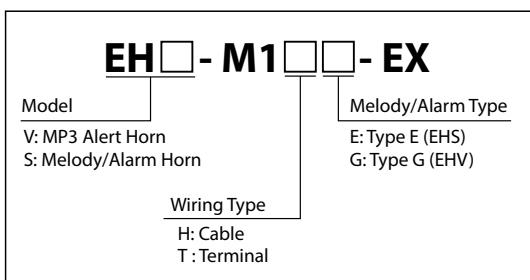
Non-voltage (NPN) Wiring



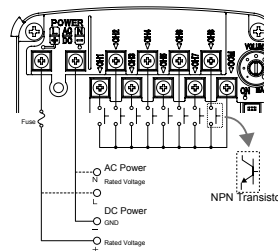
PNP Wiring



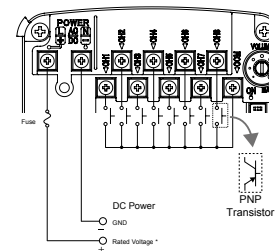
How to Order



Terminal (NPN)



Terminal (PNP)



Specifications

| Model | Rated Voltage | Voltage Range | Power Consumption | Rated Current Consumption | Sound Pressure (max) | Operating Temperature Range | No. of Playback Messages | Protection Rating | Wiring Type | Mass |
|------------|---------------|-------------------|-------------------|---------------------------|--|--------------------------------------|----------------------------------|-------------------|-------------|--------|
| EHS-M1H-EX | DC 12 - 24V | DC 10.8V to 26.4V | 4W (at DC24V) | 450mA (max) | Alarm: 110dB (at 1m) | -20°C to +50°C (Less than 85% RH) | Bit Input: 8 Binary Input: 32 | IP65 | Cable | 1.25kg |
| EHS-M1T-EX | | | | | | | | | Terminal | |
| EHV-M1H-EX | DC 12 - 24V | DC 10.8V to 26.4V | 4W (at DC24V) | 400mA (max) | Alarm: 110dB (at 1m) MP3: 105dB (at 1m) | -20°C to +50°C (Less than 85% RH) | Bit Input: 8 Binary Input: 63 | IP65 | Cable | 1.25kg |
| EHV-M1T-EX | | | | | | | | | Terminal | |

Note 1: The sound pressure level is based on measurements under controlled conditions (voice-synthesized 1 kHz sine wave played back from a distance of 1 meter), therefore the surrounding environmental conditions and message content will result in different values for the sound pressure level.

Note 2: Even when starting two or more units simultaneously, a lag will occur during message playback.

EHS-EX/EHV-EX

CLN-EX

CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIC T135°C Dc IP65 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-Safe LED Work Light



Daylight

IP66G/67G/69K

Explosion-Safe

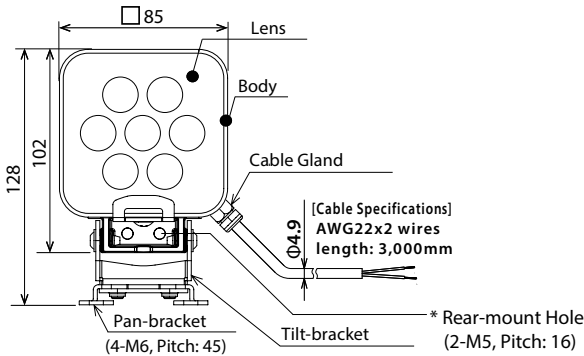
FEATURES

- 820 lx brightness
- 60,000 hrs., or about 7 years of long service life (*1)
- IP66G, IP67G, IP69K protection (*2)
- Low current draw of 174mA
- DC 24V (Polarized)
- Wide operating temperature range (-40 to +60°C)
- IEC62471 Compliance (Photobiological Safety Standard)
- Daylight Color Temperature (6,500K), suitable for very detailed work
- Made of aluminum alloy and tempered glass, is resistant to water, oil and coolants
- Includes a flexible stainless-steel angle bracket to adapt to various scenarios (*3)
- Compact, light-weight, durable design (Thickness:22.2mm x Width: 85mm x Height: 128mm)

*1 : The typical value of LED brightness is 70% of the original specification, but may vary depending on actual applications.
 *2 : IP66G and IP67G are Japanese Industrial Standards (JIS C0920-2003), and IP69K is the German DIN 40050 PART9 Standard.
 *3 : CLN-24-CD-PT-EX Work Light can only be installed where risk of mechanical danger is limited to 2 Joules of impact energy.

Dimensions (Unit: mm)

• Pan/Tilt Type (PT Type)



How to Order

CLN-24-CD-PT-EX

Movable Type

PT : Pan/Tilt

Specifications

| | |
|---|--|
| Model | CLN-24-CD-PT-EX |
| Color Code (Color) | CD (Daylight) |
| Color Temperature (typ.) | 6500K |
| Illumination (typ.) (Centered at DC 24V) | 820 lx |
| Total Luminous Flux (typ.) | 550 lm |
| Rated Voltage | DC 24V (Polarized) |
| Operating Voltage Range | DC 24V ±10% |
| Rated Consumption Current/Power Dissipation | 174mA ±10% / 4.2W |
| Operating Ambient Temperature | -40°C to +60°C (90% RH, no condensation) |
| Main Unit Material | Body: Aluminum Alloy Lens: Tempered Glass |
| Protection Rating | IP66G/67G (JIS C 0920)/69K (DIN 40050 part 9) (excluding cable ends) |
| Mounting Location/Direction | Indoor / Any Direction |
| Insulation Resistance | DC 500V 5MΩ or more between power input and metallic part |
| Withstand Voltage | 500VAC for 1 minute between power input and chassis |
| Vibration Resistance | 30Hz total amplitude 0.3mm ^{P-P} (Back and forth, up and down, left and right for 2 hrs each) total amplitude 0.3mm ^{P-P} (10-57Hz), Acceleration 19.6m/s ² |
| Mass (Tolerance ±10%) | 430g |

CLN-EX

CLK-EX

CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIC T135°C Dc IP65 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-Safe LED Work Light



CLK6C-24AG-CD-EX

CLK3S-24AG-CD-EX

Daylight
Natural White

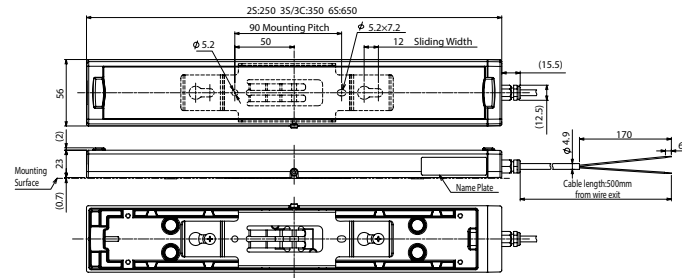
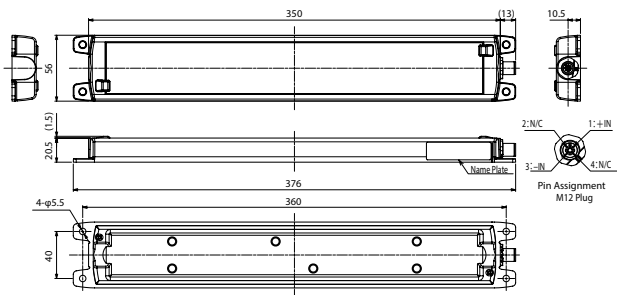
IP66G/67G/69K

Explosion-Safe

FEATURES

- Aluminum Housing
- Tempered glass lens
- IP66G/67G/69K ratings
- Explosion-safe for gas and dust
- Suitable for Zone 2 and Zone 22
- Temperature Range of -40°C to +60°C
- CE Compliance in accordance to ATEX
- 1,200 lx (3S/3C) and 2,100 lx (6S) brightness
- Outdoor installation allows Upright installation only
- LED Color Temperatures of 6,500K (CD) and 5,000K (CN)
- Stainless Steel Housing (available for 350mm long models)
- 250mm length (2S, 350mm length (3S/3C), 650mm length (6S) available

Dimensions (Unit: mm)



How to Order

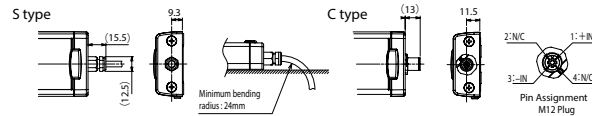
CLK-□□-24-□□-EX

Illumination Area Size
2: 200mm 3: 300mm 6: 600mm

Color
CD: Daylight
CN: Natural White

Wiring Specifications
S: Side-exiting Cable C: M12 Quick Disconnect

Body & Lens
AG: Aluminum & Glass
SG: Stainless Steel & Glass



Specifications

| | |
|---|--|
| Model | CLK-□□-24-□□-EX |
| Color Code (Color) | Natural White (CN) / Daylight (CD) |
| Rated Voltage | DC 24V |
| Operating Voltage Range | DC 24V ±10% |
| Rated Consumption Current | 522mA ±40mA (3S / 3C Type) |
| Light Source | High intensity LED x 18 elements (3S / 3C Type) |
| Luminous Intensity at Optical Center (lx at 1m) | 1200 (3S / 3C Type) |
| Main Unit Material | Body: Aluminum Alloy or Stainless Steel Lens: Tempered Glass |
| Operating Temperature Range | -40°C to +60°C (90% RH, no condensation) |
| Mounting Location/Direction | Indoor / Any Direction |
| Protection Rating | IP66G/67G (JIS C 0920)/69K (DIN 40050 part 9) (excluding cable ends) |
| Vibration Resistance | 19.6m/s ² |
| Mass (Tolerance ±10%) | 1.49kg |

*1 : The LED Work Light can only be installed in places where risk of mechanical danger is limited to an impact energy of 2 Joules. (1kg mass dropped at a 20cm height)

CLA-EX

CE II 3GD Ex nA IIC T4 Gc, Ex tc IIIC T135°C Dc IP65 94/9/EC (ATEX) CENELEC: EN 60079-0, EN 60079-15, EN 60079-31

Explosion-Safe LED Work Light



Daylight
Natural White

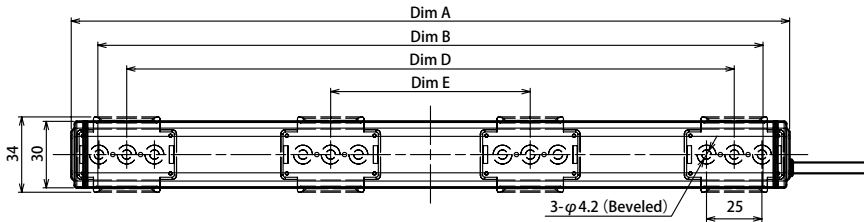
IP66/67/69K

Explosion-Safe

FEATURES

- Explosion-safe for gas and dust
- Suitable for Zone 2 and Zone 22
- CE Compliance in accordance to ATEX
- DC 24V (Polarized, ±10%)
- Cable length: 3 meters
- IP66/67/69K ratings
- Body made of Polycarbonate Resin
- Polycarbonate mounting brackets available
- Lengths available are; 100mm (140 lx), 200mm (270 lx), 300mm (400 lx), 600mm (650 lx), 900mm (810 lx), 1,200mm (890 lx), 1,500mm (945 lx)
- Temperature Range of -40°C to +60°C (RH 90% or less, no condensation)

Dimensions (Unit: mm)



| Model Name | Dim A Total Length | Dim B Lighting Area | Dim D Mounting Pitch | Dim E | Standard Bracket SZ-310AR |
|------------|-----------------------|------------------------|-------------------------|-------|------------------------------|
| CLA1S | 124 | 100 | 74 | — | 2 pcs. |
| CLA2S | 224 | 200 | 174 | — | |
| CLA3S | 324 | 300 | 274 | — | |
| CLA6S | 624 | 600 | 574 | — | 4 pcs. |
| CLA9S | 924 | 900 | 874 | 290 | |
| CLA12S | 1,224 | 1,200 | 1,174 | 390 | |

How to Order

CLA S-24- -30-EX

LED Color

CD: Daylight (6800K)

CN: Natural White (4800K)

Length (L)

- 1: 100mm 6: 600mm
- 2: 200mm 9: 900mm
- 3: 300mm 12: 1,200mm

Specifications

| Model | Luminous Color | Length | Rated Voltage | Rated Current Consumption | Center Radiation (lx/50cm) | Mounting Direction | Vibration Resistance | Mass |
|---------------------|----------------|--------|-----------------------|---------------------------|----------------------------|---------------------------------|----------------------|------|
| CLA1S -24-CD-30-EX | Daylight | 100mm | DC 24V (Polarized) | 104mA | 140 lx | Any Direction (Indoors Only) | 19.6m/s ² | 80g |
| CLA2S -24-CD-30-EX | Daylight | 200mm | | 208mA | 270 lx | | | 130g |
| CLA3S -24-CD-30-EX | Daylight | 300mm | | 240mA | 400 lx | | | 180g |
| CLA3S -24-CN-30-EX | Natural White | | | | | | | |
| CLA6S -24-CD-30-EX | Daylight | 600mm | | 480mA | 650 lx | | | 340g |
| CLA6S -24-CN-30-EX | Natural White | | | | | | | |
| CLA9S -24-CD-30-EX | Daylight | 900mm | | 720mA | 810 lx | | | 500g |
| CLA12S -24-CD-30-EX | Daylight | 1200mm | | 960mA | 890 lx | | | 660g |

RES-A

TIIS Exd IIB+H2T6

Explosion-Safe Revolving Warning Light



Bulb

Ø224

IP65

Explosion-Safe

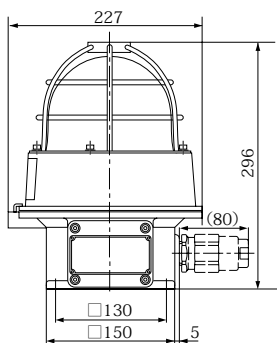
Robust Heavy Duty Revolving Warning Light.

FEATURES

- φ224mm Diameter.
- Rotating parabolic reflector to enhance visibility from a distance.
- Upright, inverted, and sideways installation allowed for indoors; and upright for outdoors only.
- Main body is made of Aluminum Alloy Die-cast with silver-colored baked enamel finish.
- Dome is made from superior weather-resistant and light-translucent acrylic resin.
- Available Colors are Red, Amber, Green, and Blue.

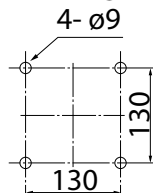
*Cable Glands are optional parts and need to be ordered separately.

Dimensions (Unit: mm)



Mounting Dimensions

Mounting Hole



Specifications

| Model | Rated Voltage | Current | Flash Rate (fpm) | Bulb | | Mass |
|------------|----------------|---------|------------------|---------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| ⊙ RES-12A | DC 12V | 0.9A | 170 | 12V 10W | 9 | 6.5kg |
| ⊙ RES-24A | DC 24V | 0.5A | | 24V 10W | 10 | |
| ⊙ RES-48A | DC 48V | 0.3A | 150 | 48V 10W | 11 | |
| RES-100A | AC 100V - 110V | 0.1A | 170 | 12V 5W | 12 | |
| ⊙ RES-120A | AC 115V - 120V | | | | | |
| RES-220A | AC 200 - 220V | 0.05A | | | | |
| ⊙ RES-240A | AC 230 - 240V | | | | | |

Bulb: G18 BA155

© Special Order





Signal Tower



ME-A/MES-A

Signal Tower



- LED
- IP42
- Ø25
- NPN
Open-collector
- Cable



Super-slim 25mm Signal Tower with aluminum body, ideal for small devices.

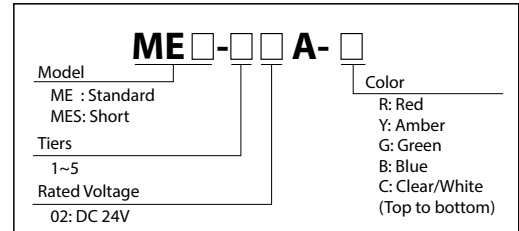
FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Lens is made of superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.
- Specially enhanced high intensity illumination design.
- Direct mount installation with just a single hole.
- Interchangeable Modules need no re-wiring, even after installation.
- Main body is constructed of corrosion resistant anodized aluminum to retain its external beauty.
- Body Length for MES-A is 40mm, and for the ME-A is 200mm.
- Conforms to the CE requirements.
- UL recognized components (File No. E215660)

AVAILABLE BY SPECIAL ORDER

- Cable: Versatile and flexible 3m cable.
- IP65 (for ME/MES).
- PNP Compatible: ME and MES 24V Types.

How to Order

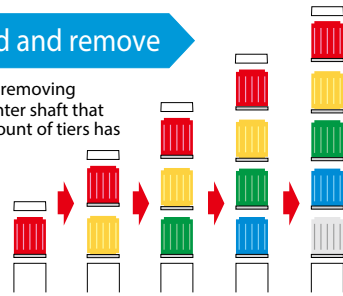


Patented reflection system increases visibility.



Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

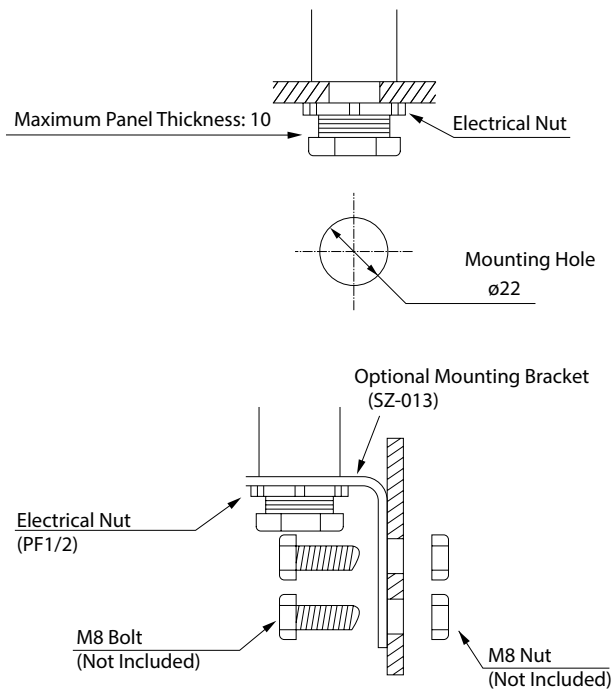
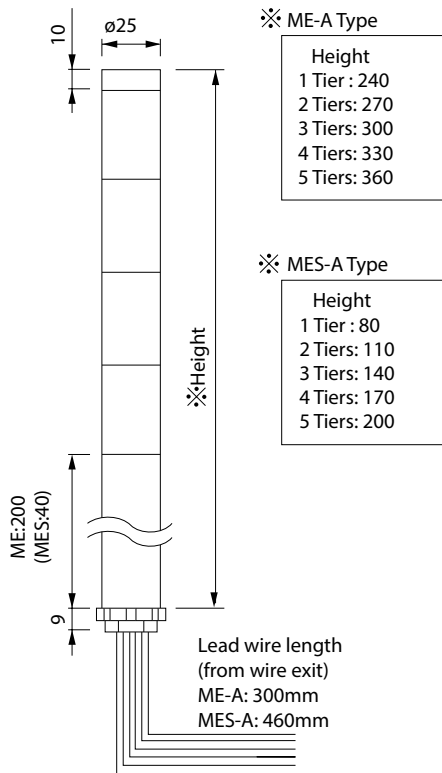
Changeable color sequence: Easy to add/ remove up to 5 colored modules even after installation.
 Note: LED modules of the same color within a signal tower will light up simultaneously.



Wiring doesn't change

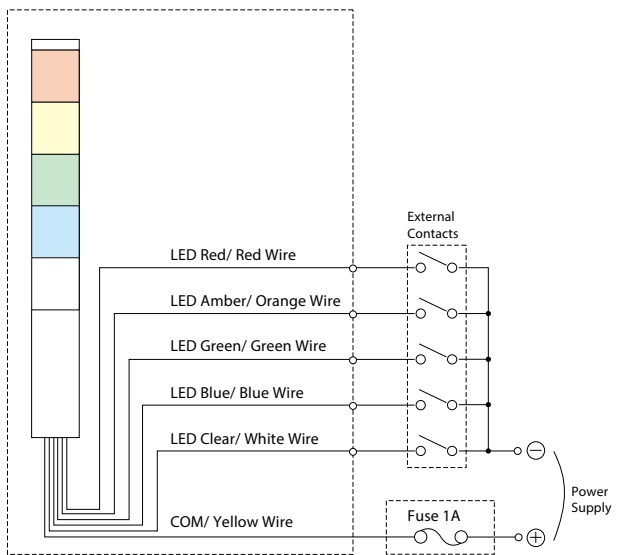
- The LED Module colors correspond to the wiring, so re-wiring is not necessary.

Dimensions (Unit: mm)

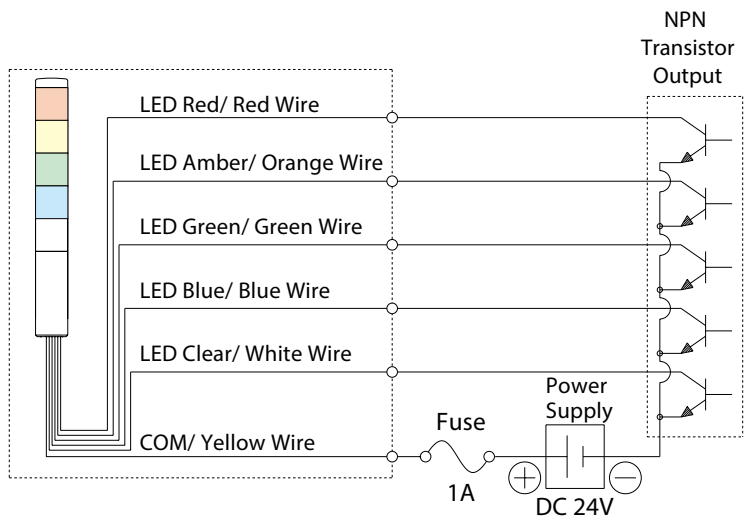


Wiring

- ME-A/MES-A Contact/ Switch



- ME-A/MES-A NPN Open Collector



Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass | |
|--------------|-------------------|---------------|-------------------|------|------|
| | | | | ME | MES |
| 1 Tier | ME/MES-102A-R | DC 24V | 0.6W | 220g | 120g |
| | ME/MES-102A-Y | | 0.6W | | |
| | ME/MES-102A-G | | 0.5W | | |
| | ME/MES-102A-B | | 0.5W | | |
| | ME/MES-102A-C | | 0.5W | | |
| 2 Tiers | ME/MES-202A-RY | | 1.2W | 230g | 130g |
| | ME/MES-202A-RG | | 1.1W | | |
| | ME/MES-202A-RB | | 1.1W | | |
| | ME/MES-202A-RC | | 1.1W | | |
| 3 Tiers | ME/MES-302A-RYG | | 1.7W | 240g | 140g |
| | ME/MES-302A-RYB | 1.7W | | | |
| | ME/MES-302A-RYC | 1.7W | | | |
| 4 Tiers | ME/MES-402A-RYGB | 2.3W | 250g | 150g | |
| | ME/MES-402A-RYGC | 2.3W | | | |
| 5 Tiers | ME/MES-502A-RYGBC | 2.8W | 260g | 160g | |

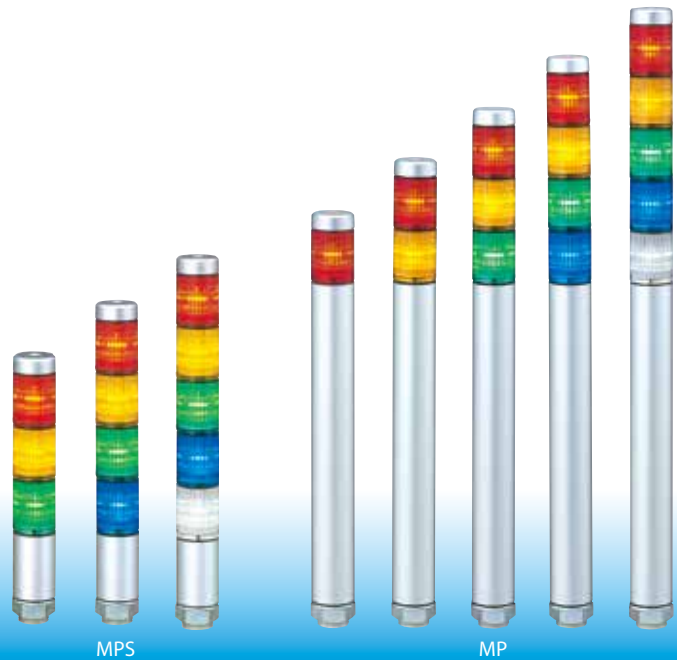
MP/MPS



Signal Tower



- LED
- IP65
- Ø30
- Cable
- NPN/PNP
Open-collector

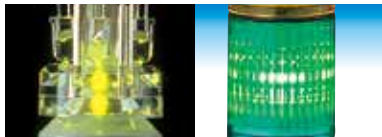


Super slim 30mm silver body Signal Tower, ideal for small devices.

FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Double-insulated construction for enhanced durability and safety in the work environment.
- Direct mount installation with just a single hole.
- Interchangeable Modules need no re-wiring, even after installation.
- Main body is constructed of superior impact and heat resistant ABS resin.
- Lens is made of superior weather resistant and light translucent AS resin.
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.
- Conforms to the CE requirements.
- UL Recognized Components (File No. E215660)

Patented reflection system increases visibility.



High-intensity LED

Good visibility from any direction

AVAILABLE BY SPECIAL ORDER

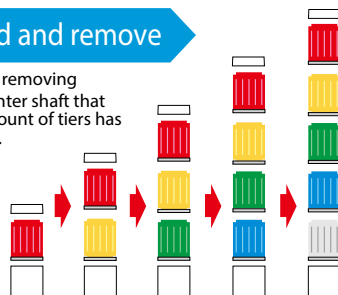
- All Clear Lenses: Distinctive color recognition when operated with clear lenses (B0738 type).
- Cable: Versatile and flexible 3m cable.



Optional MP-B Buzzer
(See Pg. 193)

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.

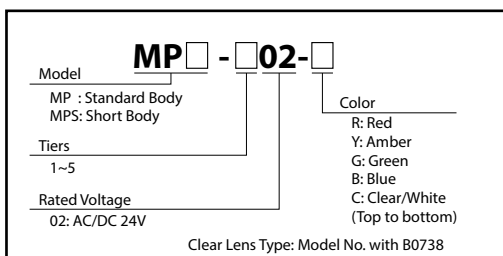
Note: LED modules of the same color within a signal tower will light up simultaneously.

Wiring doesn't change

- The LED Module colors correspond to the wiring, so re-wiring is not necessary.



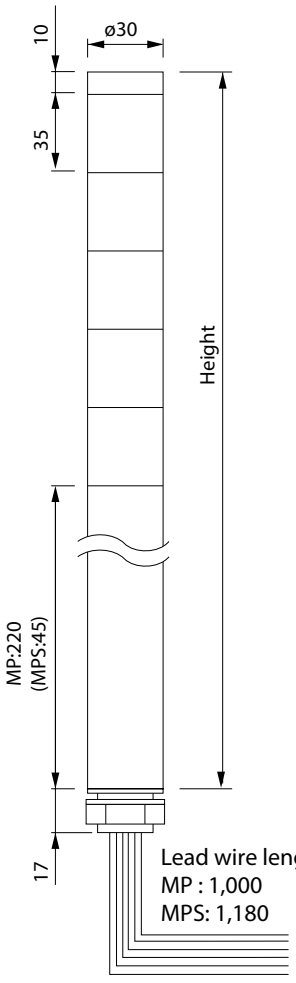
How to Order



Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass | |
|--------------|------------|---------------|-------------------|------|------|
| | | | | MP | MPS |
| 1 Tier | MP/MPS-102 | AC/DC 24V | 0.7W | 210g | 110g |
| 2 Tiers | MP/MPS-202 | | 1.4W | 230g | 130g |
| 3 Tiers | MP/MPS-302 | | 2.0W | 250g | 150g |
| 4 Tiers | MP/MPS-402 | | 2.6W | 270g | 170g |
| 5 Tiers | MP/MPS-502 | | 3.2W | 290g | 190g |

Dimensions (Unit: mm)

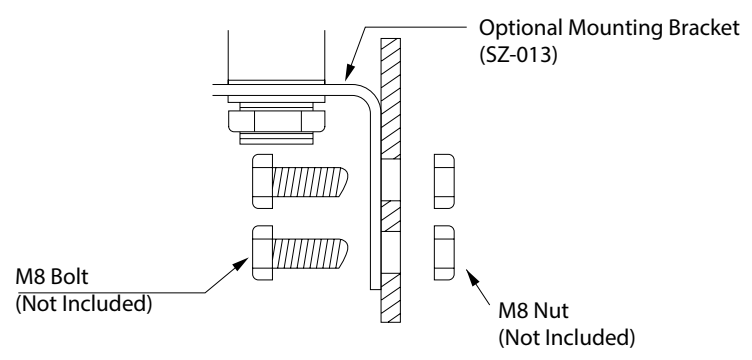
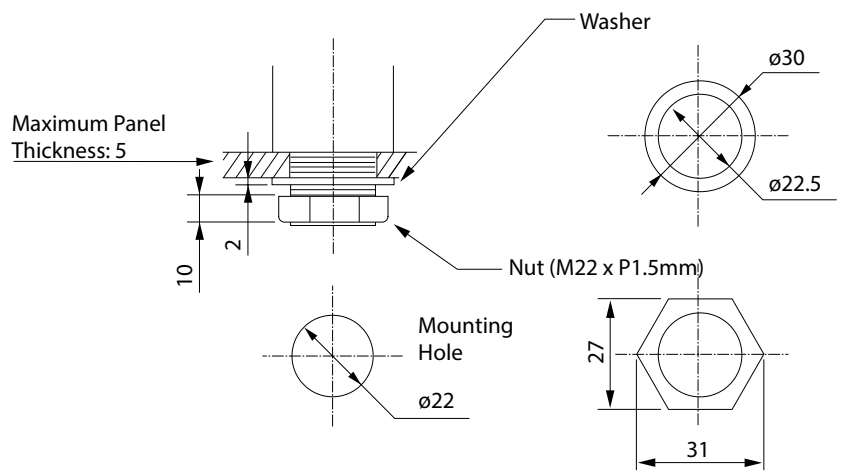


MP Type

| |
|---------------|
| Height |
| 1 Tier : 265 |
| 2 Tiers : 300 |
| 3 Tiers : 335 |
| 4 Tiers : 370 |
| 5 Tiers : 405 |

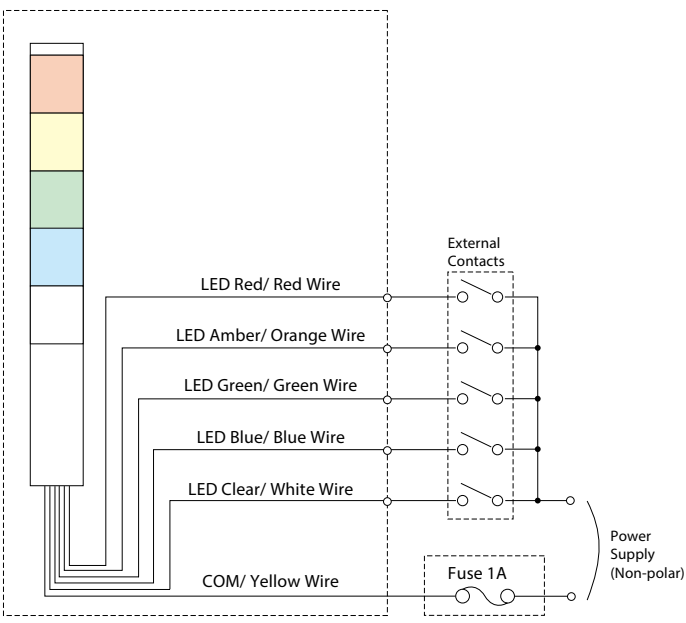
MPS Type

| |
|---------------|
| Height |
| 1 Tier : 90 |
| 2 Tiers : 125 |
| 3 Tiers : 160 |
| 4 Tiers : 195 |
| 5 Tiers : 230 |

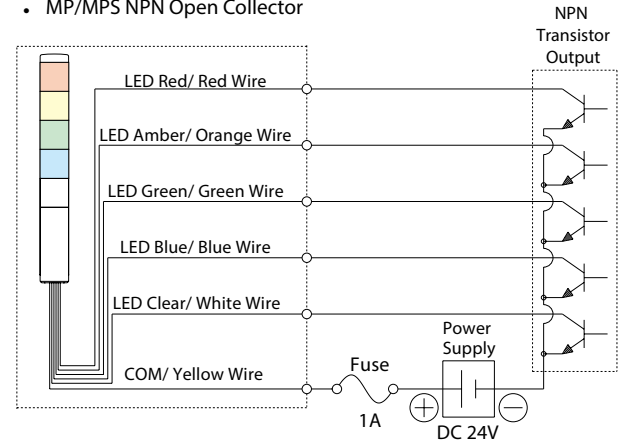


Wiring

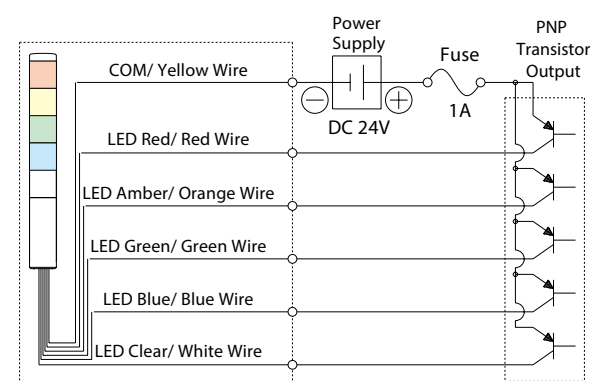
- MP/MPS Contact/ Switch



- MP/MPS NPN Open Collector



- MP/MPS PNP Open Collector



MP-C



Signal Tower



LED



IP65

Ø30

M12 Cable

NPN/PNP
Open-collector

Super slim 30mm silver body Signal Tower with M12 disconnect.

FEATURES

- Quick Disconnect M12 connector for the MP Signal Tower.
- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Double-insulated construction for enhanced durability and safety in the work environment.
- Direct mount installation with just a single hole.
- Interchangeable Modules need no re-wiring, even after installation.
- Main body is constructed of superior impact and heat resistant ABS resin.
- Lens is made of superior weather resistant and light translucent AS resin.
- Available in 1, 2 or 3 tier stacks with colors in Red, Amber and Green.
- Conforms to the CE requirements.
- UL Recognized Components (File No. E215660)



Optional MP-B Buzzer
(See Pg. 193)

Patented reflection system increases visibility.



High-intensity
LED

Good visibility
from any direction

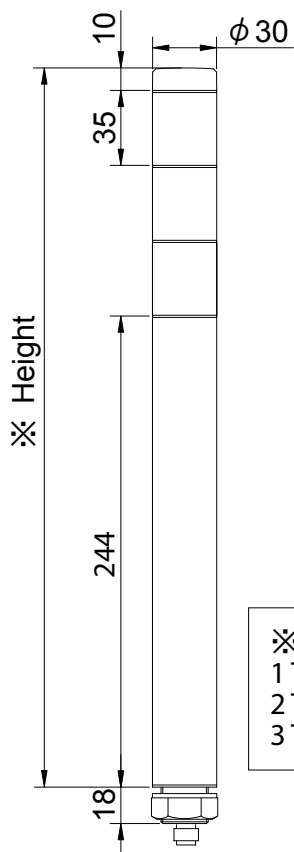
How to Order

| | | |
|-----------------|--------------------|---|
| MP-302C- | | |
| Model | MP : Standard Body | Color |
| Tiers | 1~3 | R: Red Y: Amber G: Green (Top to bottom) |
| Rated Voltage | 02: 24V DC | Lead Type |
| | | Blank : Wire Leads C : M12 Quick Disconnect |

Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass |
|--------------|--------|---------------|-------------------|------|
| 1 Tier | MP-102 | DC 24V | 0.7W | 240g |
| 2 Tiers | MP-202 | | 1.4W | 260g |
| 3 Tiers | MP-302 | | 2.0W | 280g |

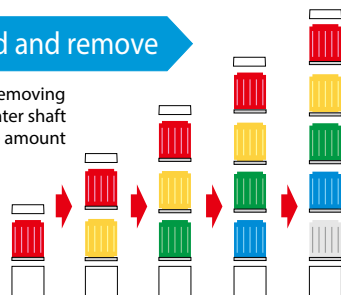
Dimensions (Unit: mm)



※ Height
 1 Tier : 289
 2 Tiers: 324
 3 Tiers: 359

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

Changeable color sequence: Easy to add/ remove up to 5 colored modules even after installation.

Note: LED modules of the same color within a signal tower will light up simultaneously.



Wiring doesn't change

- The LED Module colors correspond to the wiring, so re-wiring is not necessary.

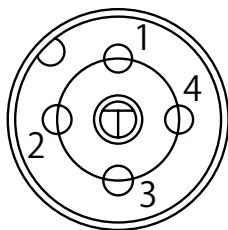
Wiring

| External Contact Capacity | | Is: Current Capacity | | Vs: Withstand Voltage |
|---------------------------|---------------------|----------------------|---------------|-----------------------|
| LED Unit (1 Tier) | Current Consumption | Red: 29.mA | Amber: 29.5mA | Green: 23.9mA |
| | Capacity | Is≥50mA | | Vs≥35V DC |
| Power Supply | Current Consumption | 200mA | | |
| | Capacity | Is≥200mA | | Vs≥35V DC |

- MP-C M12 Connector

M12 Connector Pin No.

| Pin No. | LED Unit Color |
|---------|----------------|
| 1 | Green |
| 2 | Red |
| 3 | Common |
| 4 | Amber |



M12 Connector Pin Layout



LCE/LCE-U

Signal Tower



Ivory-white Body
Model LCE

Silver Color Body
Model LCE-U



- LED**
- 2 Alarm Sounds** (FB Type)
- 85db at 1m** (FB Type)
- IP65** (LCE-FB Type: IP54)
(LCE-K Type: IP54)
- Ø40**
- Cable**
- NPN/PNP Open-collector**

The low-priced, high quality LED Signal Tower featuring low maintenance and energy savings.

FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Two Built-in Alarms (FB Type) with selectable sound patterns.
- Adjustable volume with a maximum of 85dB (at 1m).
- Direct or pole mount installation.
- Color-coordinated Wiring Corresponding to the lens color for quick wiring and verification.
- Interchangeable LED Modules requires no re-wiring, even after installation.
- Main body made of ABS resin with superior resistance to impact and heat. (U type has silver body and 3m cable)
- Lens is made of superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible inputs for 24V DC type (M2 type compatible with NPN only).
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.
- High visibility from any angle.
- Conforms to the CE requirements (for 24V type).
- UL Recognized Components (File No. E215660).
- NEMA Type 4/4X/13 for -W, -FBW Only



High visibility from any angle



Adjustable Volume (Max. 85dB at 1m)

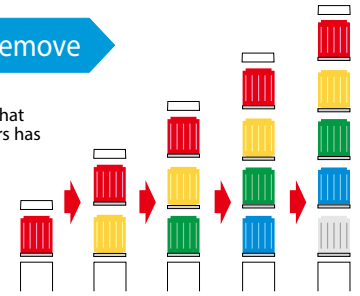


Dual Reflection System

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



How to Order

| LCE- [] [] [] [] [] - [] [] [] [] | |
|--|--------------------------------|
| Model | Lens Color |
| Tiers | Blank: Colored lens |
| 1~5 | Z: Clear lens |
| Rated Voltage | LED Color |
| 02: AC/DC 24V | R: Red |
| M2: AC 90~250V | Y: Amber |
| Body Color | G: Green |
| Blank: IvoryWhite | B: Blue |
| U: Silver | C: Clear/White (Top to bottom) |
| Type | Mount |
| Blank: Continuous light | Blank: SZ-012 Pole Mount |
| FB: Flashing/ Alarm | W: Direct Mount |
| FBK: SZ-021 Pole Mount | |

Interchangeable LED Modules

Changeable color sequence: Easy to add/ remove up to 5 colored modules even after installation.

Note: LED modules of the same color within a signal tower will light up simultaneously.

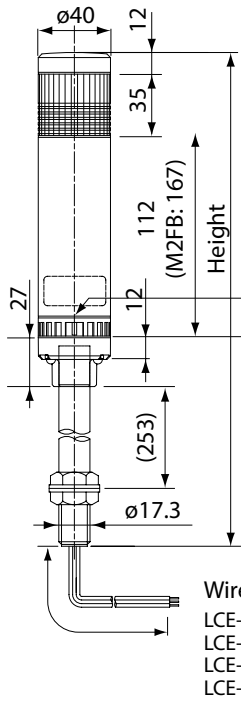


Wiring doesn't change

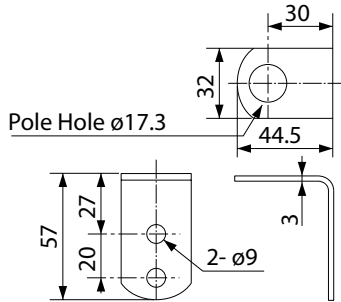
- The LED Module colors correspond to the wiring, so re-wiring is not necessary.

Dimensions (Unit: mm)

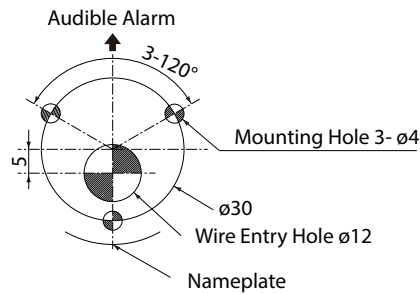
LCE Type LCE-U Type



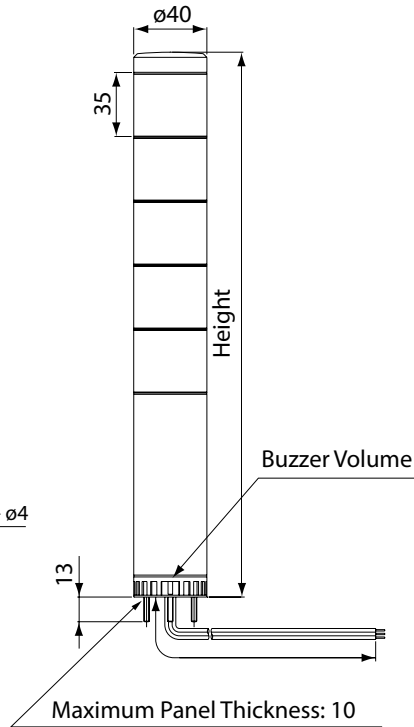
Side-Mount Bracket



Direct-mount Dimensions



LCE-W Type LCE-UW Type



LCE-M2FB Type

| |
|--------------|
| Height |
| 1 Tier : 213 |
| 2 Tiers: 248 |
| 3 Tiers: 283 |
| 4 Tiers: 318 |
| 5 Tiers: 353 |

LCE Type LCE-U Type

| |
|--------------|
| Height |
| 1 Tier : 158 |
| 2 Tiers: 193 |
| 3 Tiers: 228 |
| 4 Tiers: 263 |
| 5 Tiers: 298 |

Wire Length

| |
|------------------|
| LCE-02W: 1,400 |
| LCE-(FB): 1,000 |
| LCE-M2W: 1,350 |
| LCE-M2FBW: 1,250 |

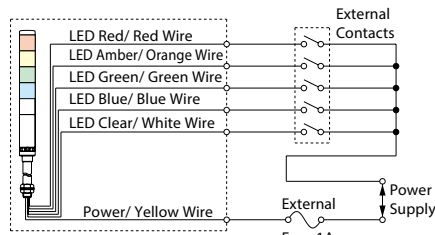
Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass | | | |
|--------------|------------|---------------|-------------------|------|-------|--------|---------|
| | | | | LCE | LCE-W | LCE-FB | LCE-FBW |
| 1 Tier | LCE-102(U) | AC/DC 24V | 1.7W | 520g | 160g | 580g | 220g |
| | LCE-1M2 | AC 90 -250V | 1.9W | 600g | 240g | 650g | 290g |
| 2 Tiers | LCE-202(U) | AC/DC 24V | 2.4W | 550g | 190g | 610g | 250g |
| | LCE-2M2 | AC 90 -250V | 2.6W | 630g | 270g | 680g | 320g |
| 3 Tiers | LCE-302(U) | AC/DC 24V | 3.0W | 580g | 220g | 640g | 280g |
| | LCE-3M2 | AC 90 -250V | 3.2W | 660g | 300g | 710g | 350g |
| 4 Tiers | LCE-402(U) | AC/DC 24V | 3.6W | 610g | 250g | 670g | 310g |
| | LCE-4M2 | AC 90 -250V | 3.8W | 690g | 330g | 740g | 380g |
| 5 Tiers | LCE-502(U) | AC/DC 24V | 4.2W | 640g | 280g | 700g | 340g |
| | LCE-5M2 | AC 90 -250V | 4.4W | 720g | 360g | 770g | 410g |

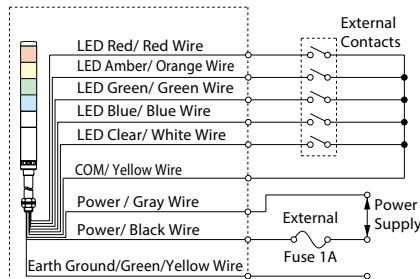


Wiring

• AC/DC 24V Lighting Type



• AC 90 - 250V Lighting Type

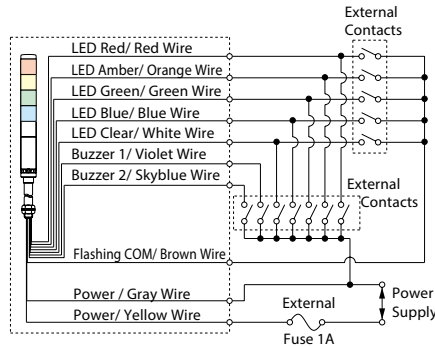


Lead-wire color coordination table

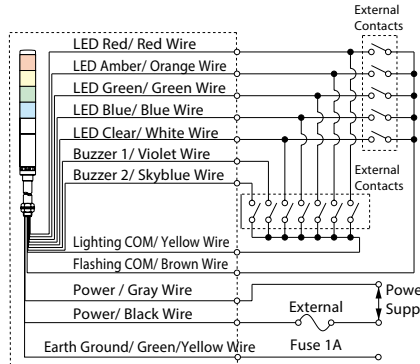
| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

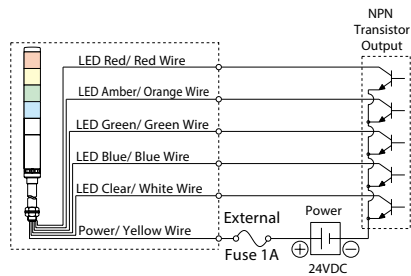
• AC/DC 24V Lighting/Flashing Type



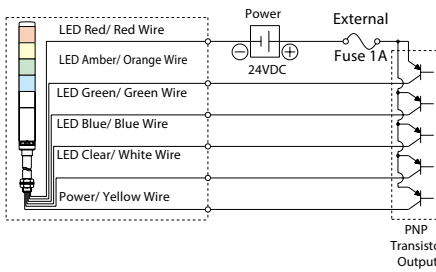
• AC 90 - 250V Lighting/Flashing Type



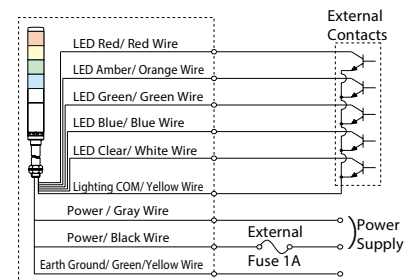
• DC 24V NPN Type



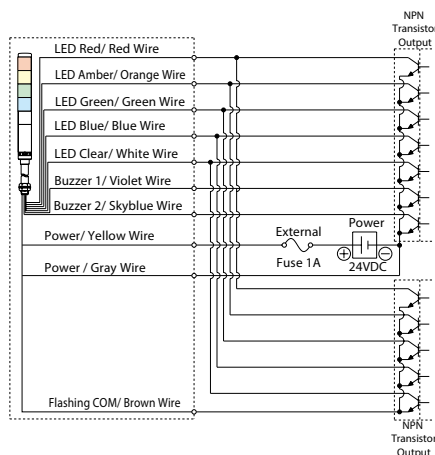
• DC 24V PNP Type



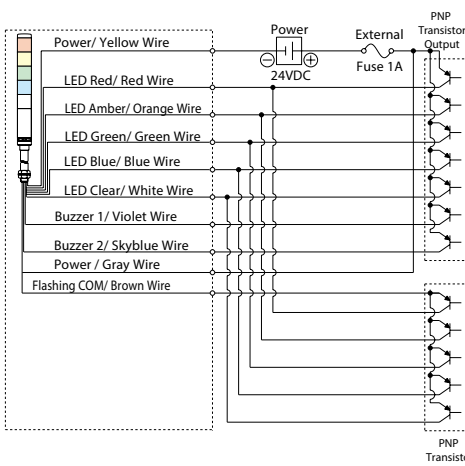
• AC 90 - 250V NPN Type



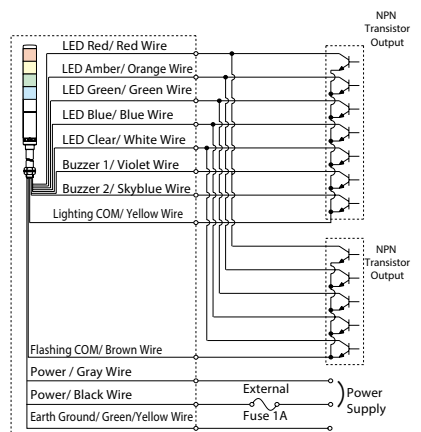
• DC 24V NPN FB Type



• DC 24V PNP FB Type



• AC 90 - 250V NPN FB Type



Signal Line voltage and current per LED Module

| Model | Rated Voltage | Signal Line Voltage | LED | | Alarm | |
|-----------|---------------|---------------------|---------------------|---------|---------------------|----------------|
| | | | Signal Line Current | | Signal Line Current | Inrush Current |
| | | | R, Y | G, B, C | | |
| LCE/LCE-U | AC/DC 24V | AC/DC 24V | 30mA | 25mA | 40mA | 250mA |
| LCE-M2 | AC 90V - 250V | DC 24V | 30mA | 25mA | 40mA | 250mA |

LCS/LCS-U

LCS/LCS-U

Silver Body
Model LCS-U

Ivory-white Body
Model LCS

Signal Tower



Versatile LED Signal Tower, featuring high quality with low price.

FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Direct or pole mount installation.
- Color-coordinated wiring corresponding to the lens color for quick wiring and verification.
- Interchangeable LED Modules requires no re-wiring, even after installation.
- Main body made of ABS resin with superior resistance to impact and heat.
- Lens is made of superior impact resistant and light translucent AS resin.
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive.
- Is a UL Recognized Component (File No. E215660).

AVAILABLE BY SPECIAL ORDER

- Cable: Versatile and flexible 3m cable.
- Body Color: Silver (LCS-U)
- All Clear Lenses: Distinctive color recognition when operated with clear lenses (B0738 type)
- Available Colors: Red, Amber, Green, Blue, White



Dual Reflection System

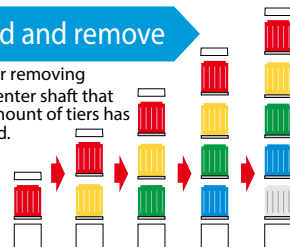
PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.



High visibility from any angle

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.

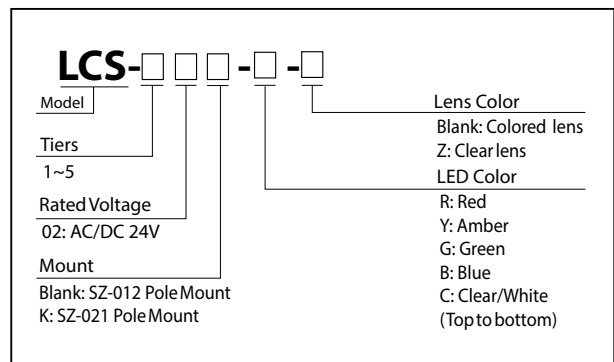
Note: LED modules of the same color within a signal tower will light up simultaneously.



Wiring doesn't change

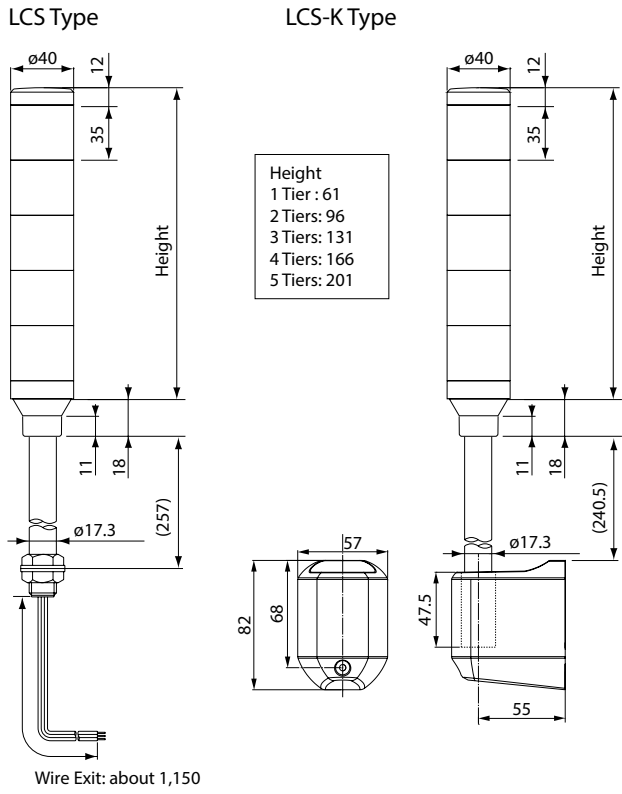
- The LED Module colors correspond to the wiring, so re-wiring is not necessary.

How to Order



When ordering the clear-lens Signal Tower type, be sure to add "-Z" at the end of the part number when ordering.

Dimensions (Unit: mm)

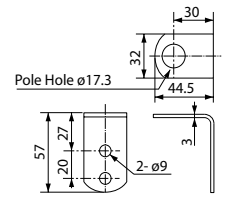


Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass | |
|--------------|---------|---------------|-------------------|------|-------|
| | | | | LCS | LCS-K |
| 1 Tier | LCS-102 | AC/DC 24V | 0.7W | 420g | 540g |
| 2 Tiers | LCS-202 | | 1.4W | 450g | 570g |
| 3 Tiers | LCS-302 | | 2.0W | 480g | 600g |
| 4 Tiers | LCS-402 | | 2.6W | 510g | — |
| 5 Tiers | LCS-502 | | 3.2W | 540g | — |

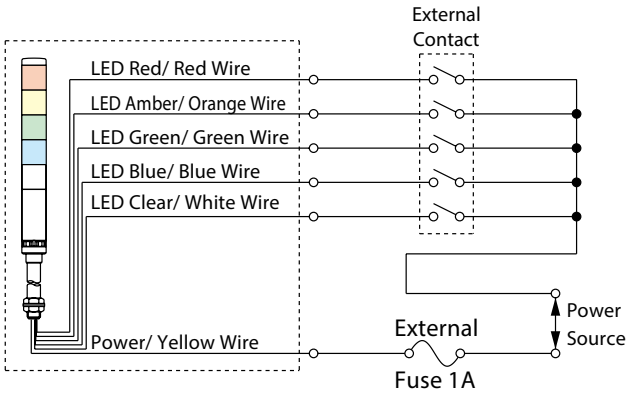


Side-Mount Bracket



Wiring

AC/DC 24V Lighting Type



Lead-wire color coordination table

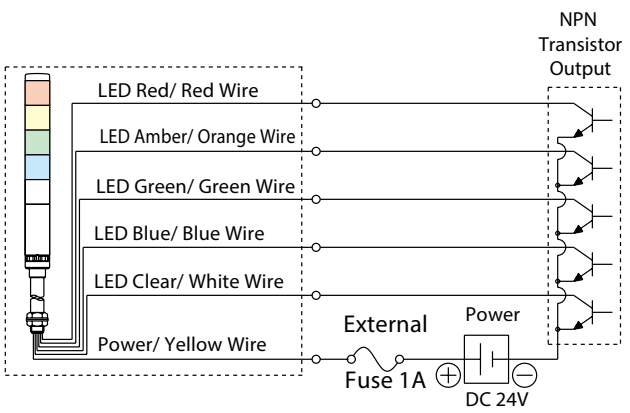
| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

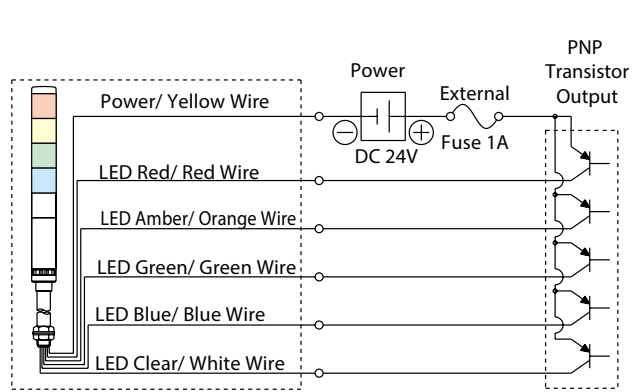
Signal Line voltage and current per LED Module

| Model | Voltage Type | Signal Line Voltage | LED | | Alarm | |
|-------|--------------|---------------------|---------------------|---------|---------------------|----------------|
| | | | Signal Line Current | | Signal Line Current | Inrush Current |
| | | | R, Y | G, B, C | | |
| LCS | AC/DC 24V | AC/DC 24V | 30mA | 25mA | 40mA | 250mA |

DC 24V NPN Type



DC 24V PNP Type



LES-A

LES

Signal Tower



- LED
- IP54 (Pole-mount IP23)
- Ø50
- NPN/PNP Open-collector

Versatile, cost and energy efficient LED Signal Tower for every need.



High visibility from any angle



Dual Reflection System

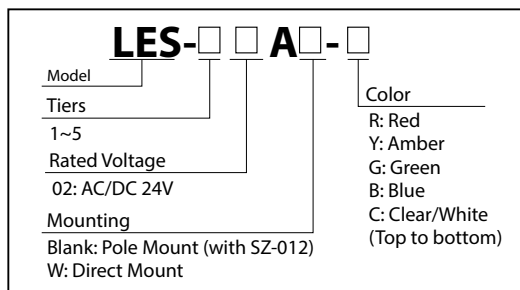
PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.

FEATURES

- PATLITE's exclusive Prism-Cut Lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Direct or pole mount installation.
- Main body is constructed of ABS resin with superior resistance to impact and heat.
- Lens is made of superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible.
- Conforms to the CE requirements.
- UL Recognized Components (File No. E215660).
- Available colors* are in Red, Amber, Green, Blue, and Clear/White.

*Tiers cannot be increased due to the number of wires corresponding to the amount of tiers.

How to Order

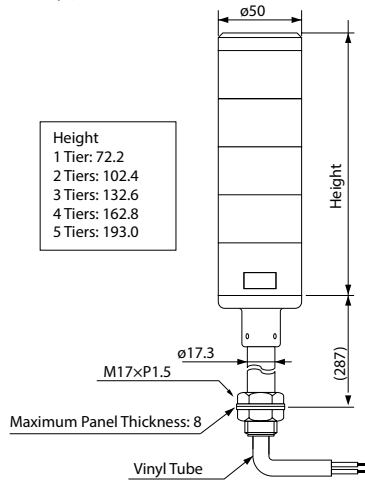


Specifications

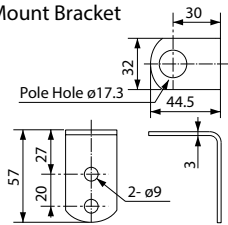
| Stack Number | Model | Rated Voltage | Power Consumption | Mass |
|-------------------|---------|---------------|-------------------|------|
| Pole Type | 1 Tier | LES-102A | 0.6W | 500g |
| | 2 Tiers | LES-202A | 1.2W | 530g |
| | 3 Tiers | LES-302A | 1.7W | 560g |
| | 4 Tiers | LES-402A | 2.2W | 590g |
| | 5 Tiers | LES-502A | 2.7W | 600g |
| Direct Mount Type | 1 Tier | LES-102AW | 0.6W | 70g |
| | 2 Tiers | LES-202AW | 1.2W | 100g |
| | 3 Tiers | LES-302AW | 1.7W | 130g |
| | 4 Tiers | LES-402AW | 2.2W | 160g |
| | 5 Tiers | LES-502AW | 2.7W | 190g |

Dimensions (Unit: mm)

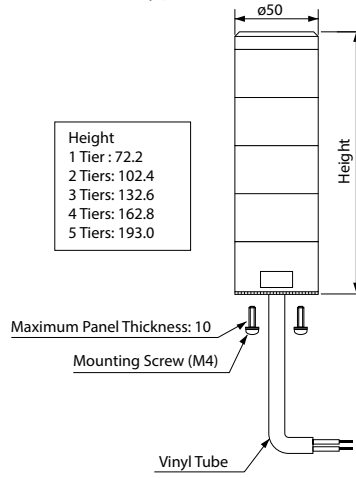
LES-A Type



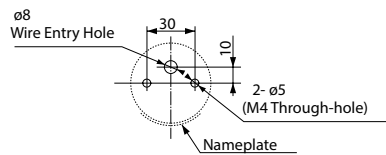
Side-Mount Bracket



LES-AW Type



Mounting Dimension

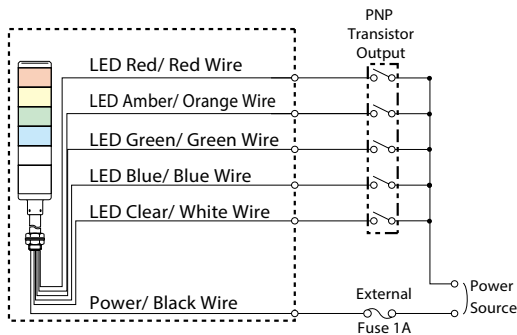


Lead-wire color coordination table

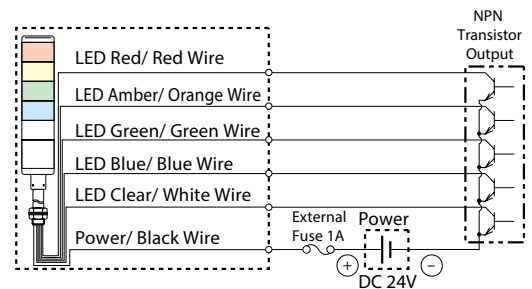
| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

LES Model

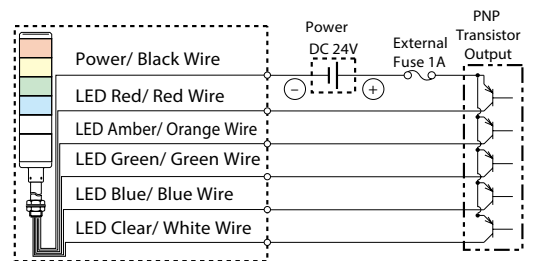
AC/DC 24V Lighting Type



DC 24V NPN Type



DC 24V PNP Type



Signal Line voltage and current per LED Module

| Model | Voltage Type | Signal Line Voltage | LED | | |
|-------|--------------|---------------------|---------------------|------|------|
| | | | Signal Line Current | | |
| | | | R, Y | G, C | B |
| LES | AC/DC 24V | AC/DC 24V | 25mA | 20mA | 22mA |





LE



Direct Mount

Pole Mount

Signal Tower



- LED**
- 2 Alarm Sounds** (FB Type)
- 85dB** at 1m
- IP54** (Pole-mount IP23)
- Ø50**
- NPN/PNP**
Open-collector

Versatile, cost and energy efficient LED Signal Tower for every need.



High visibility from any angle

Dual Reflection System

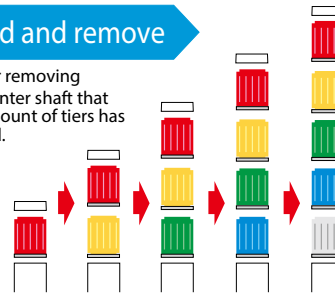
PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.

FEATURES

- PATLITE's exclusive Prism-Cut Lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Two built-in alarms (FB Type) with selectable sound patterns.
- Adjustable volume of up to 85dB (at 1m).
- Direct or pole mount installation.
- Color-coordinated wiring corresponding to the lens color for quick wiring and verification.
- Interchangeable Modules need no re-wiring, even after installation.
- Main body is constructed of ABS resin with superior resistance to impact and heat.
- Lens is made of superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible (Except for LE 100/220V AC, compatible with NPN only).
- Available colors are in Red, Amber, Green, Blue, and Clear/White.
- Conforms to the CE requirements (for 12V, 24V type only).
- UL Recognized Components (File No. E215660) (for 12V,24V type only).

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



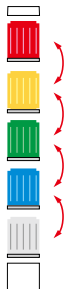
Interchangeable LED Modules

Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.

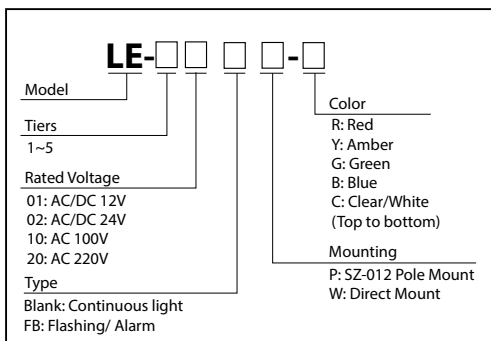
Note: LED modules of the same color within a signal tower will light up simultaneously.

Wiring doesn't change

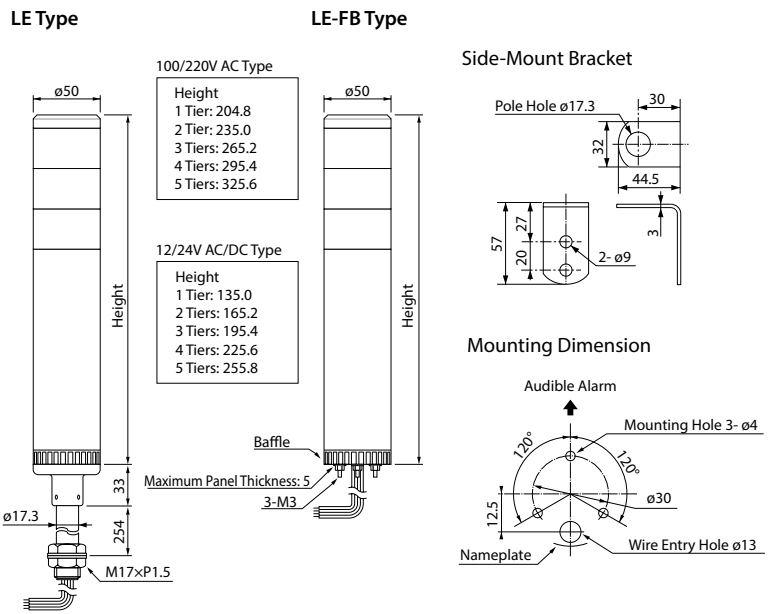
- The LED Module colors correspond to the wiring, so re-wiring is not necessary.



How to Order



Dimensions (Unit: mm)



Specifications

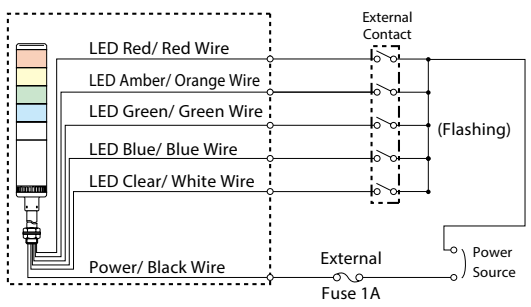
| Stack Number | Model | Rated Voltage | Power Consumption | Mass | |
|--------------|--------|---------------|-------------------|-------|-------|
| | | | | (FB)P | (FB)W |
| 1 Tier | LE-101 | AC/DC 12V | 1.1W | 640g | 260g |
| | LE-102 | AC/DC 24V | 1.6W | | |
| | LE-110 | AC 100V | 5.7W | 780g | 400g |
| | LE-120 | AC 220V | | | |
| 2 Tiers | LE-201 | AC/DC 12V | 1.7W | 690g | 310g |
| | LE-202 | AC/DC 24V | 2.2W | | |
| | LE-210 | AC 100V | 6.7W | 830g | 450g |
| | LE-220 | AC 220V | | | |
| 3 Tiers | LE-301 | AC/DC 12V | 2.2W | 740g | 360g |
| | LE-302 | AC/DC 24V | 2.7W | | |
| | LE-310 | AC 100V | 7.5W | 880g | 500g |
| | LE-320 | AC 220V | | | |
| 4 Tiers | LE-401 | AC/DC 12V | 2.7W | 790g | 410g |
| | LE-402 | AC/DC 24V | 3.2W | | |
| | LE-410 | AC 100V | 8.3W | 930g | 550g |
| | LE-420 | AC 220V | | | |
| 5 Tiers | LE-501 | AC/DC 12V | 3.2W | 840g | 460g |
| | LE-502 | AC/DC 24V | 3.7W | | |
| | LE-510 | AC 100V | 9.1W | 980g | 600g |
| | LE-520 | AC 220V | | | |



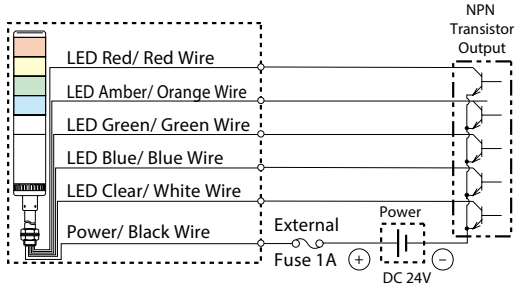
Wiring

LE Model

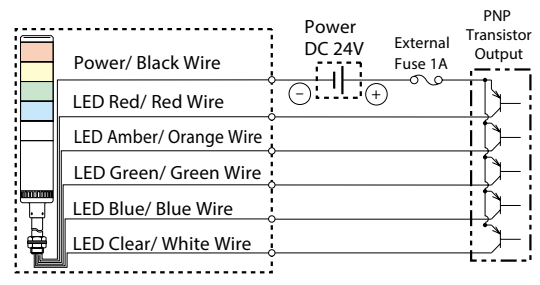
AC/DC 24V Lighting Type



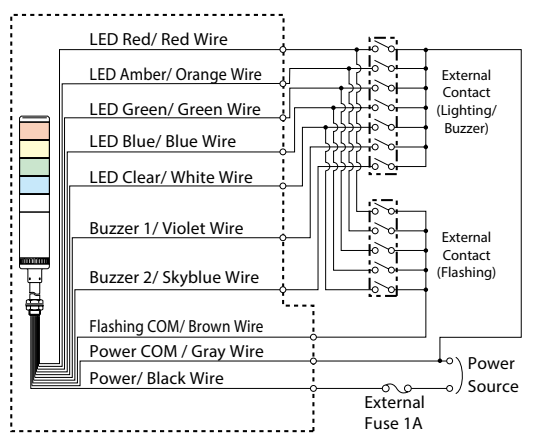
DC 24V NPN Type



DC 24V PNP Type

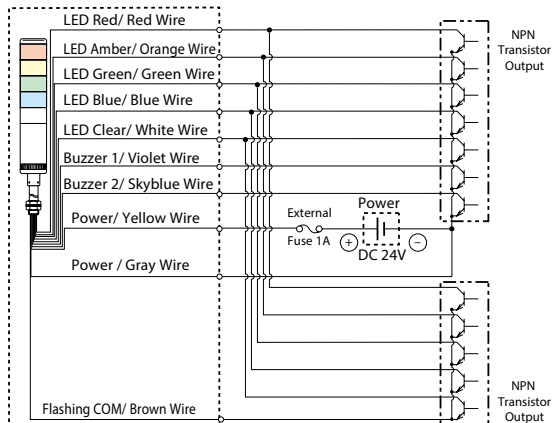


AC/DC 24V Lighting/Flashing Type

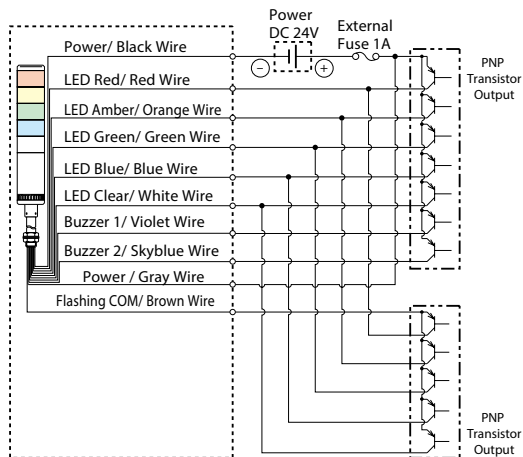


LE Model

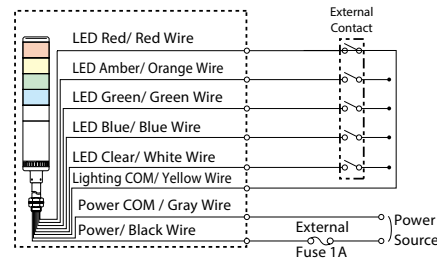
DC 24V NPN FB Type



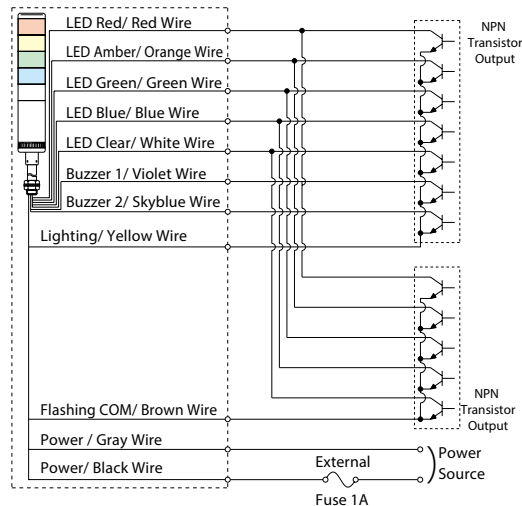
DC 24V PNP FB Type



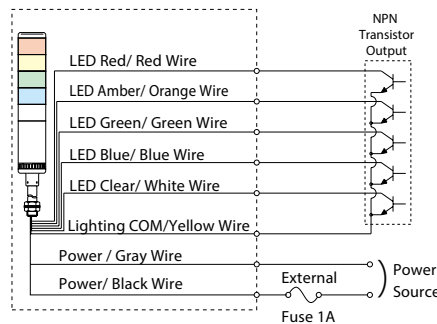
AC Power Lighting Type



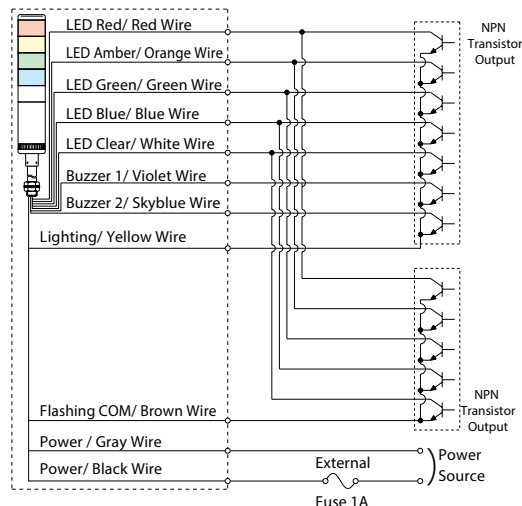
AC Power Lighting/Flashing Type



AC Power NPN Type



AC Power NPN FB Type



Signal Line Voltage and Current per LED Module

| Voltage Type | Signal Line Voltage | LED | | | Alarm | |
|---------------|---------------------|---------------------|------|------|---------------------|----------------|
| | | Signal Line Current | | | Signal Line Current | Inrush Current |
| | | R, Y | G, C | B | | |
| AC/DC 12V | AC/DC 12V | 50mA | 40mA | 44mA | 40mA | 150mA |
| AC/DC 24V | AC/DC 24V | 25mA | 20mA | 22mA | | |
| AC 100V, 220V | DC 24V | 25mA | 20mA | 22mA | | |

Lead-wire color coordination table

| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

LU5

Signal Tower



LED



2 Alarm Sounds

85dB at 1m

IP65

Ø50

NPN/PNP
Open-collector



Versatile modular Signal Tower featuring easy assembly and wiring designed for every need.

FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Two built-in alarms (FB Type) with selectable sound patterns.
- Maximum volume of up to 85dB (at 1m).
- Direct or pole* mount installation.
- Color-coordinated Terminal block corresponding to the lens colors for quick wiring and verification.
- Interchangeable LED Modules requires no re-wiring, even after installation.
- Lens is made of superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.

AVAILABLE BY SPECIAL ORDER

- Modules of the same color can be modified to operate from different terminals.

* Optional part sold separately.



How to Order

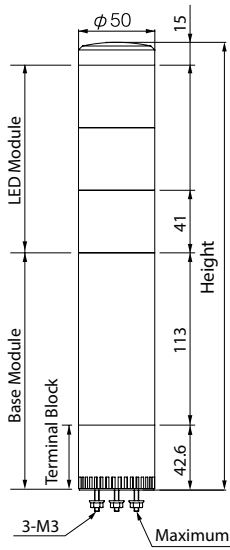
| | | | |
|----------------|-----------|--------------------|-------------------------|
| LED Module | | Base Unit | |
| LU5-E-R | | LU5-02UFB | |
| LED Unit | Color | Rated Voltage | Type |
| | R: Red | 02: DC 24V | Blank: Continuous Light |
| | Y: Amber | Base Color | FB : Flashing/ Alarm |
| | G: Green | Blank: Ivory White | |
| | B: Blue | U : Silver | |
| C: White/Clear | K : Black | | |

Specifications (Module)

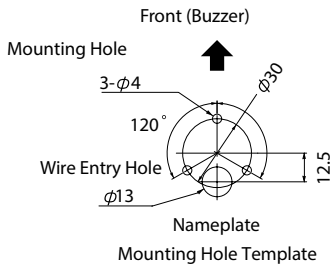
| Module Color | Model | Rated Voltage | Operating Voltage Range | Current/ Power Consumption | Mass |
|--------------|---------|---------------|-------------------------|----------------------------|------|
| RED | LU5-E-R | DC 24V | 21.6V - 26.4V | 44mA/1.06W | 44g |
| AMBER | LU5-E-Y | | | | |
| GREEN | LU5-E-G | | | | |
| BLUE | LU5-E-B | | | | |
| CLEAR | LU5-E-C | | | | |
| | | | | 17mA/0.41W | |

Specifications (Base)

| Model | Options | Rated Voltage | Operating Voltage Range | Open Collector | Mass |
|----------|----------------|---------------|-------------------------|----------------|------|
| LU5-02 | Continuous | DC 24V | 21.6V - 26.4V | NPN/PNP | 182g |
| LU5-02FB | 2 Sounds/Flash | | | | 200g |



Mounting Dimensions



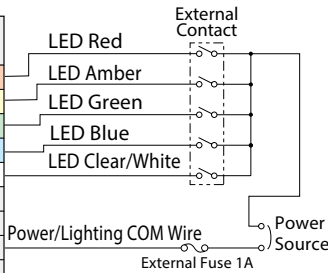
LU5 Type

| Height |
|--------------|
| 1 Tier: 211 |
| 2 tiers: 252 |
| 3 Tiers: 293 |
| 4 Tiers: 334 |
| 5 Tiers: 375 |

• AC/DC 24V Lighting Type

[CN2]

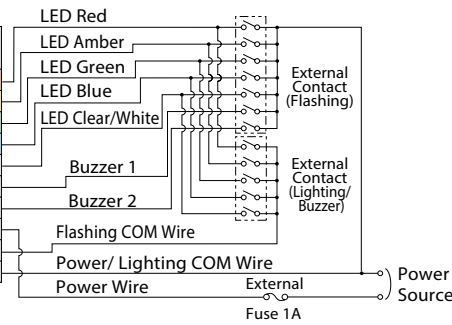
| Terminal No. | Terminal Color | Module/Operation |
|--------------|----------------|--------------------|
| 1 | Red | Red LED Module |
| 2 | Amber | Amber LED Module |
| 3 | Green | Green LED Module |
| 4 | Blue | Blue LED Module |
| 5 | White | White LED Module |
| 6 | Gray | |
| 7 | Black | |
| 8 | Yellow | Power/Lighting COM |
| 9 | Grey | |
| 10 | Black | |



• AC/DC 24V Lighting/Flashing Type

[CN2]

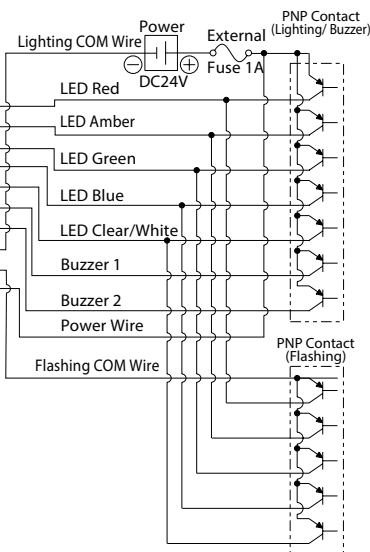
| Terminal No. | Terminal Color | Module/Operation |
|--------------|----------------|--------------------|
| 1 | Red | Red LED Module |
| 2 | Amber | Amber LED Module |
| 3 | Green | Green LED Module |
| 4 | Blue | Blue LED Module |
| 5 | White | White LED Module |
| 6 | Gray | Buzzer 1 |
| 7 | Black | Buzzer 2 |
| 8 | Yellow | Power |
| 9 | Grey | Flashing COM |
| 10 | Black | Power/Flashing COM |



• DC 24V PNP FB Type

[CN2]

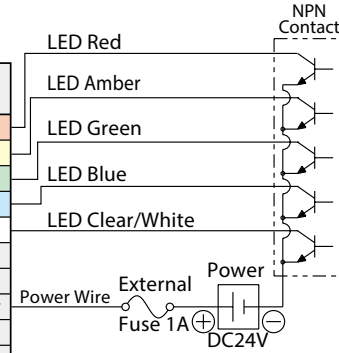
| Terminal No. | Terminal Color | Module/Operation |
|--------------|----------------|--------------------|
| 1 | Red | Red LED Module |
| 2 | Amber | Amber LED Module |
| 3 | Green | Green LED Module |
| 4 | Blue | Blue LED Module |
| 5 | White | White LED Module |
| 6 | Gray | Buzzer 1 |
| 7 | Black | Buzzer 2 |
| 8 | Yellow | Power |
| 9 | Grey | Flashing COM |
| 10 | Black | Power/Flashing COM |



• DC 24V NPN Type

[CN2]

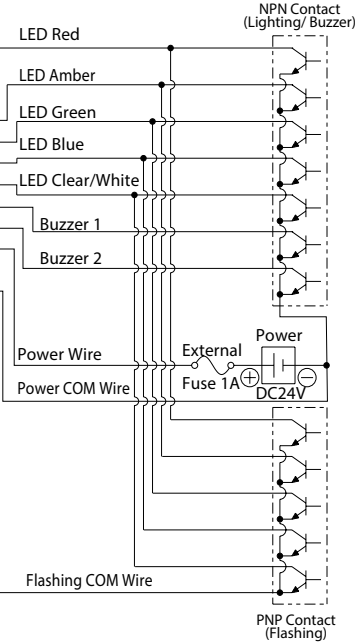
| Terminal No. | Terminal Color | Module/Operation |
|--------------|----------------|------------------|
| 1 | Red | LED Red |
| 2 | Amber | LED Amber |
| 3 | Green | LED Green |
| 4 | Blue | LED Blue |
| 5 | White | LED Clear/White |
| 6 | Gray | |
| 7 | Black | |
| 8 | Yellow | Power Wire |
| 9 | Grey | External Fuse 1A |
| 10 | Black | DC24V |



• DC 24V NPN FB Type

[CN2]

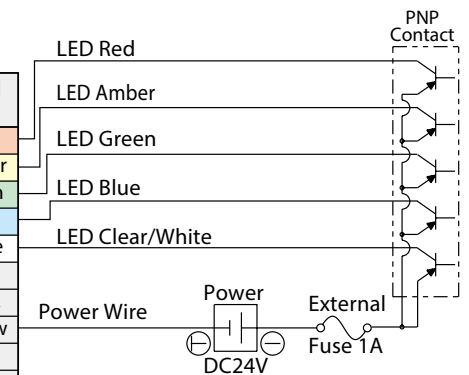
| Terminal No. | Terminal Color | Module/Operation |
|--------------|----------------|------------------|
| 1 | Red | LED Red |
| 2 | Amber | LED Amber |
| 3 | Green | LED Green |
| 4 | Blue | LED Blue |
| 5 | White | LED Clear/White |
| 6 | Gray | Buzzer 1 |
| 7 | Black | Buzzer 2 |
| 8 | Yellow | Power Wire |
| 9 | Grey | External Fuse 1A |
| 10 | Black | DC24V |



• DC 24V PNP Type

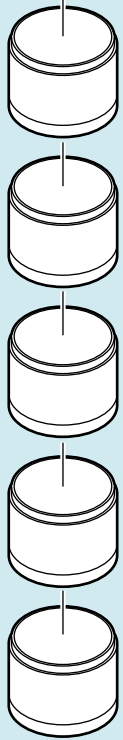
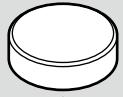
[CN2]

| Terminal No. | Terminal Color | Module/Operation |
|--------------|----------------|------------------|
| 1 | Red | LED Red |
| 2 | Amber | LED Amber |
| 3 | Green | LED Green |
| 4 | Blue | LED Blue |
| 5 | White | LED Clear/White |
| 6 | Gray | |
| 7 | Black | |
| 8 | Yellow | Power Wire |
| 9 | Grey | External Fuse 1A |
| 10 | Black | DC24V |



External Contact Capacity

| Specifications | | 24V DC |
|-----------------------|---------------------|--|
| LED Unit (1 Unit) | Current Consumption | Red,Amber: 52mA Green,Blue,White/Clear: 42mA |
| | Contact Capacity | Is≥100mA, Vs≥35V AC |
| Buzzer | Current Consumption | 50mA |
| | Inrush Current | 100mA |
| | Contact Capacity | Is≥100mA, Vs≥35V AC |
| Power Supply | Current Consumption | 360mA |
| | Contact Capacity | Is≥500mA, Vs≥35V AC |
| External Contact Fuse | | |
| Voltage | | Fuse Amperage Rating |
| All Models | | 250V, 1A |



LED Units



| Model | LU5-E-R | LU5-E-Y | LU5-E-G | LU5-E-B | LU5-E-C |
|------------------------------|--|---------|-----------|---------|---------|
| Unit Color | | | | | |
| Rated Voltage | 24V DC | | | | |
| Operating Voltage Range | Rated Voltage $\pm 10\%$ (21.6 to 26.4V) | | | | |
| Current/Power Consumption | 52mA/1.25W | | 42mA/1.0W | | |
| Operating Temperature Range | -30°C to +60°C | | | | |
| Mass (Tolerance $\pm 10\%$) | 44g | | | | |

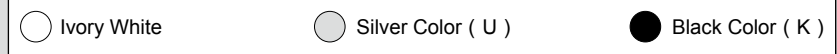


BASE Units



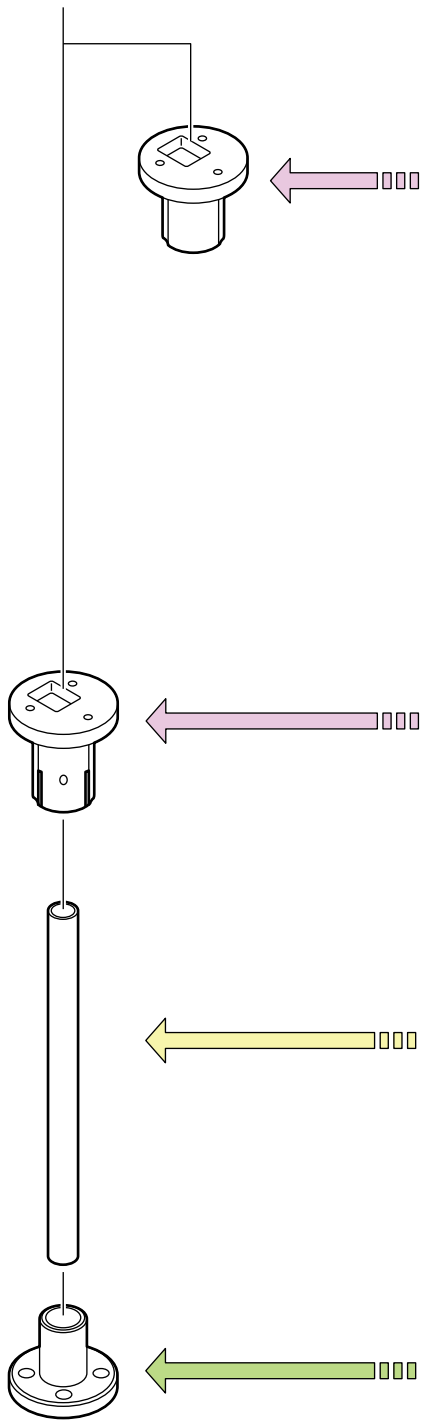
| Model | LU5-02 | LU5-02FB | |
|------------------------------|---|---------------------------------|------------------|
| Color | | | |
| Body Style | Standard | | |
| Rated Voltage | 24V DC | | |
| Operating Voltage Range | Rated Voltage $\pm 10\%$ (21.6 ~ 26.4V) | | |
| Alarm | | *Buzzer 1 | *Buzzer 2 |
| Current Consumption | | 50 \pm 10mA | 24 \pm 10mA |
| Power Consumption | | 1.2 \pm 0.25W | 0.58 \pm 0.25W |
| Sound Level | | Max:85 \pm 5dB (at 1m) | |
| Flashing Cycle | | 60 \pm 12 flashes per minutes | |
| Operating Temperature Range | -30°C to +60°C | | |
| Mounting Direction | Upright, indoor only | | |
| Protection Rating | IP65 | | |
| Mass (Tolerance $\pm 10\%$) | 182g | 200g | |
| Open Collector | PNP/NPN | | |

* Buzzer 1 : Continuous Sound **Buzzer 2 : Intermittent Sound



Optional Parts

Optional Parts



Upper Bracket

SZ-60NPT
(for 1/2" NPT Pole)

Upper Bracket

SZ-60-U

Pole

21.7mm

Height

| Steel Pole | | | |
|------------|-------------|-------------|-------------|
| Model | POLE-800S21 | POLE-300S21 | POLE-100S21 |
| Height | 800mm | 300mm | 100mm |

| Aluminum Pole | | | |
|---------------|-------------|-------------|-------------|
| Model | POLE-800A21 | POLE-300A21 | POLE-100A21 |
| Height | 800mm | 300mm | 100mm |

| | | | |
|-------------------------------------|---|------------------------------------|------------------------------------|
| Mounting Bracket | | Wall Mount Bracket | |
| | | | |
| SZ-016A (For ϕ 21.7mm Pole) | SZ-70-B (For ϕ 21.7mm Aluminum Pole Only) | SZ-020 (For ϕ 21.7mm Pole) | SZ-017 (For ϕ 21.7mm Pole) |



LME/LME-U/LME-N

Signal Tower



LED



Silver Color Body
Model LME-U

Black Color Body
Model LME-N

2 Alarm Sounds (FB Type)

90dB at 1m (FB Type)

IP65 (FB, L, K: IP54)

Ø60

Cable (LME-U)



NPN/PNP
Open-collector

Ivory-white Body
Model LME



Versatile, cost and energy efficient LED Signal Tower for every need.



High visibility
from any angle



Adjustable Volume
(Max. 90dB at 1m)



Dual Reflection System

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.

FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Two built-in alarms (FB Type) with selectable sound patterns.
- Adjustable volume of up to 90dB (at 1m).
- Direct or pole mount installation.
- Interchangeable Modules need no re-wiring, even after installation.
- Main body is constructed of ABS resin with superior resistance to impact and heat. (U type has silver body and 3m cable)
- Lens is made of superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible (Except 120/220V AC LME-U, compatible with NPN only).
- Available colors are in Red, Amber, Green, Blue, and Clear/White.
- Conforms to the CE requirements (for 24V type only).
- UL Recognized Components (File No. E215660; for 24V, 120V, 230V type only)

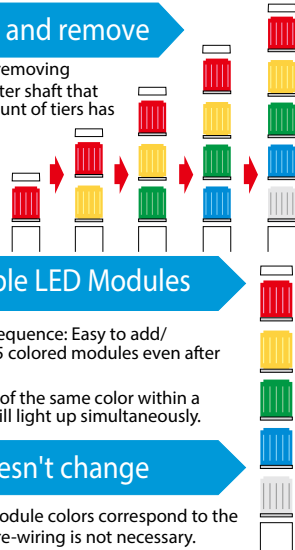
ON OFF



When ordering the clear-lens Signal Tower type, be sure to add "-Z" at the end of the part number when ordering.

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

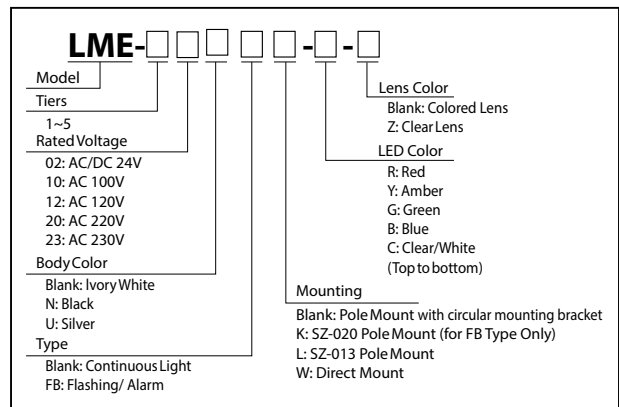
Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.

Note: LED modules of the same color within a signal tower will light up simultaneously.

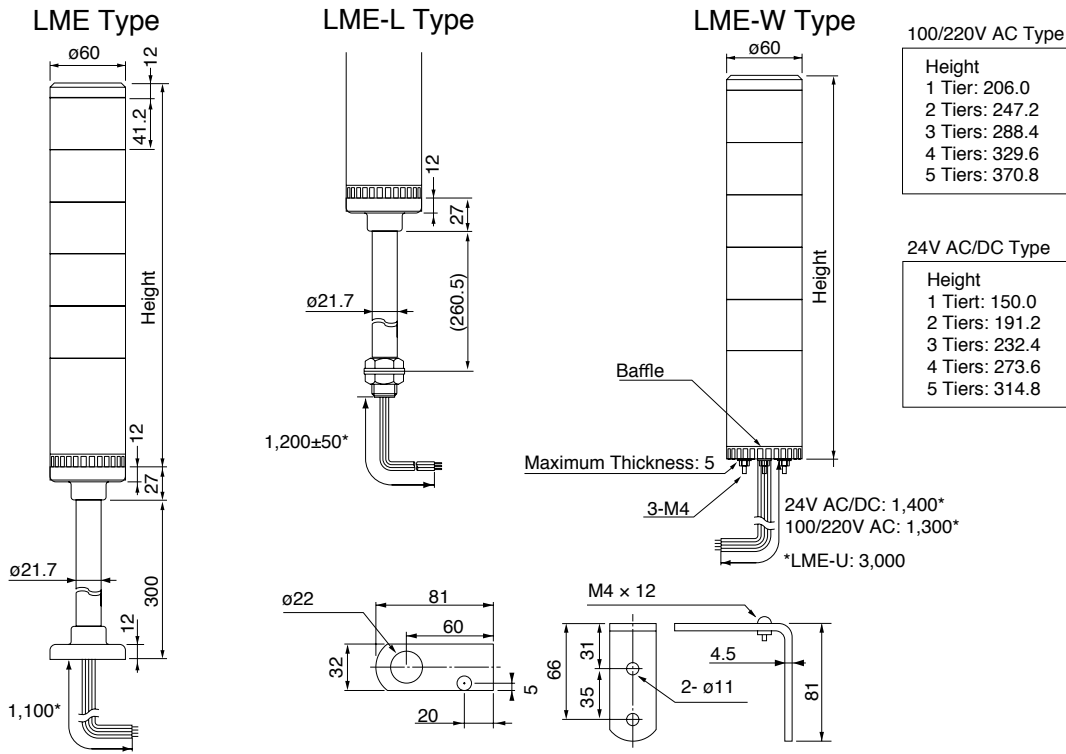
Wiring doesn't change

- The LED Module colors correspond to the wiring, so re-wiring is not necessary.

How to Order



Dimensions (Unit: mm)



Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass | | |
|--------------|---------|---------------|-------------------|--------|--------|--------|
| | | | | LME | LME-L | LME-W |
| 1 Tier | LME-102 | AC/DC 24V | 2.2W | 0.43kg | 0.73kg | 0.27kg |
| | LME-110 | AC 100V | 5.1W | 0.68kg | 1.06kg | 0.52kg |
| | LME-112 | AC 120V | | | | |
| | LME-120 | AC 220V | | | | |
| | LME-123 | AC 230V | | | | |
| 2 Tiers | LME-202 | AC/DC 24V | 3.4W | 0.48kg | 0.78kg | 0.32kg |
| | LME-210 | AC 100V | 7.1W | 0.73kg | 1.10kg | 0.57kg |
| | LME-212 | AC 120V | | | | |
| | LME-220 | AC 220V | | | | |
| | LME-223 | AC 230V | | | | |
| 3 Tiers | LME-302 | AC/DC 24V | 3.8W | 0.53kg | 0.83kg | 0.37kg |
| | LME-310 | AC 100V | 7.9W | 0.78kg | 1.14kg | 0.62kg |
| | LME-312 | AC 120V | | | | |
| | LME-320 | AC 220V | | | | |
| | LME-323 | AC 230V | | | | |
| 4 Tiers | LME-402 | AC/DC 24V | 4.2W | 0.58kg | 0.88kg | 0.42kg |
| | LME-410 | AC 100V | 8.7W | 0.83kg | 1.18kg | 0.67kg |
| | LME-412 | AC 120V | | | | |
| | LME-420 | AC 220V | | | | |
| | LME-423 | AC 230V | | | | |
| 5 Tiers | LME-502 | AC/DC 24V | 4.6W | 0.63kg | 0.93kg | 0.47kg |
| | LME-510 | AC 100V | 9.5W | 0.86kg | 1.22kg | 0.72kg |
| | LME-512 | AC 120V | | | | |
| | LME-520 | AC 220V | | | | |
| | LME-523 | AC 230V | | | | |

Lead-wire color coordination table

| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

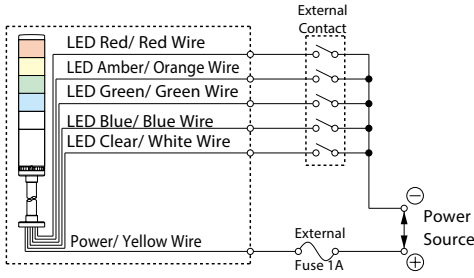
| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

Signal Line voltage and current per LED Module

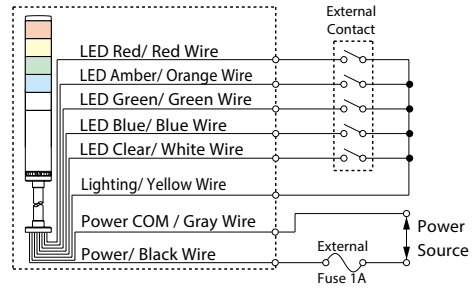
| Rated Voltage | Signal Line Voltage | LED | | Alarm | |
|---------------|---------------------|---------------------|---------|---------------------|----------------|
| | | Signal Line Current | | Signal Line Current | Inrush Current |
| | | R, Y | G, B, C | | |
| AC/DC 24V | AC/DC 24V | 50mA | 20mA | 40mA | 250mA |
| AC 100V | DC 24V | | | | |
| AC 200V | | | | | |

Wiring

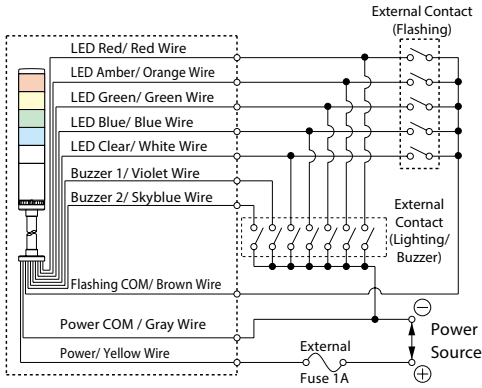
• DC 24V Lighting Type



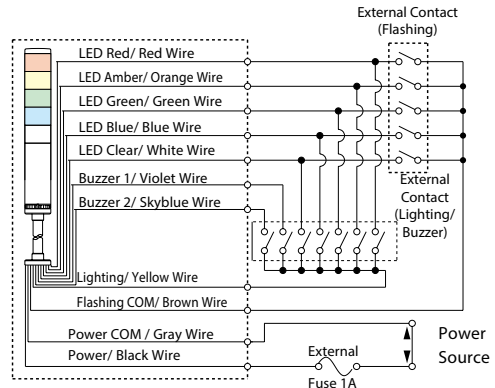
• AC Power Lighting Type



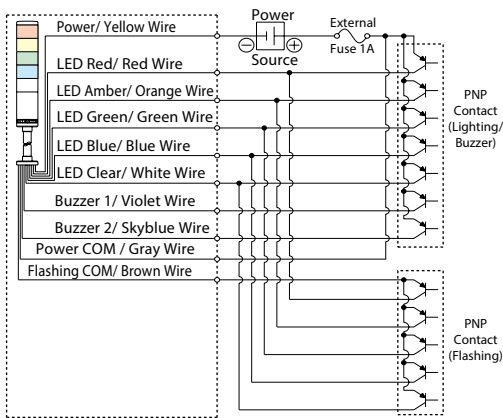
• DC 24V Lighting/Flashing Type



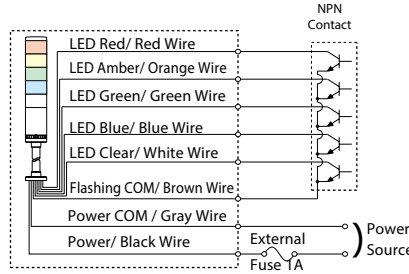
• AC Power Lighting/Flashing Type



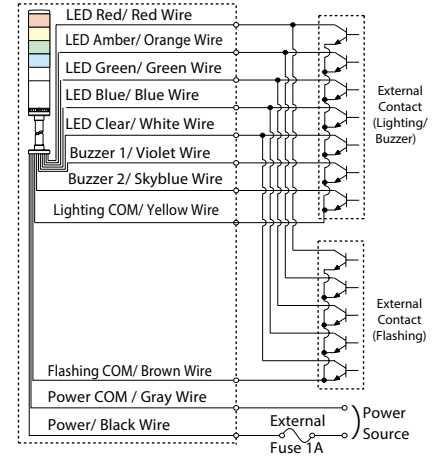
• DC 24V NPN FB Type



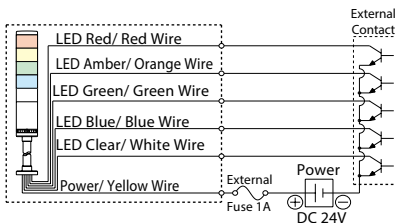
• AC Power NPN Type



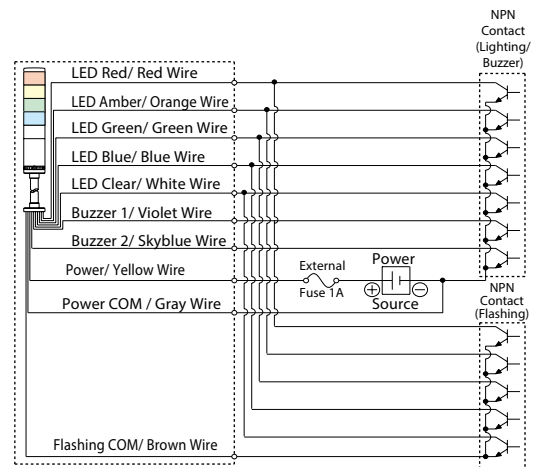
• AC Power NPN FB Type



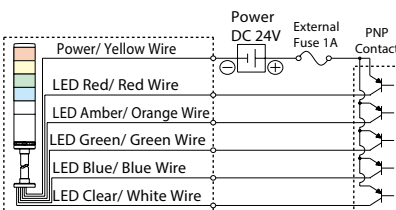
• DC 24V NPN Type



• DC 24V PNP FB Type



• DC 24V PNP Type





LME-S / LME-Q

Signal Tower



LED

2 Alarm Sounds (FB Type)

90dB at 1m (FB Type)

IP65 (FB Type:IP54)

Cable

Ø60

**NPN/PNP
Open-collector**

LME-S/LME-Q



Space-saving, multi-color single-tier LED Signal Tower.



High visibility from any angle

Adjustable Volume (Max. 90dB at 1m)



Dual Reflection System

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.

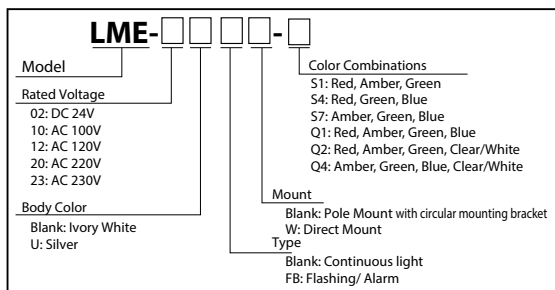
FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Two built-in alarms (FB Type) with selectable sound patterns.
- Adjustable volume of up to 90dB (at 1m).
- Direct or pole mount installation.
- Interchangeable Modules need no re-wiring, even after installation.
- PATLITE's single-tiered triple or quadruple colored unit is ideal for applications with limited vertical space.
- Pole-mount installation includes a circular mounting base as standard equipment.
- See "Color Coordination Combination" Section for available colors.

MODEL LME-S AVAILABLE BY SPECIAL ORDER

- Rated Voltage: AC/DC 24V only.
- Body: Silver Color
- Cable: Versatile and flexible 3m cable.
- PNP compatible

How to Order



Specifications

| Series | Stack Number | Model | Rated Voltage | Power Consumption | Mass | |
|--------|--------------|---------|---------------|-------------------|------|-------|
| | | | | | LME | LME-W |
| LME-S | 1 Tier | LME-102 | DC 24V | 2.2W | 430g | 270g |
| | | LME-110 | AC 100V | | | |
| | | LME-112 | AC 120V | 5.1W | 860g | 520g |
| | | LME-120 | AC 220V | | | |
| | | LME-123 | AC 230V | | | |
| LME-Q | 1 Tier | LME-102 | DC 24V | 2.2W | 430g | 270g |
| | | LME-110 | AC 100V | | | |
| | | LME-112 | AC 120V | 5.1W | 680g | 520g |
| | | LME-120 | AC 220V | | | |
| | | LME-123 | AC 230V | | | |

Patlite's unique single-tier unit with triple or quadruple colors integrated.

S1: Red, Amber, Green



S4: Red, Green, Blue



S7: Amber, Green, Blue



Q1: Red, Amber, Green, Blue



Q2: Red, Amber, Green, Clear/White



Q4: Amber, Green, Blue, Clear/White

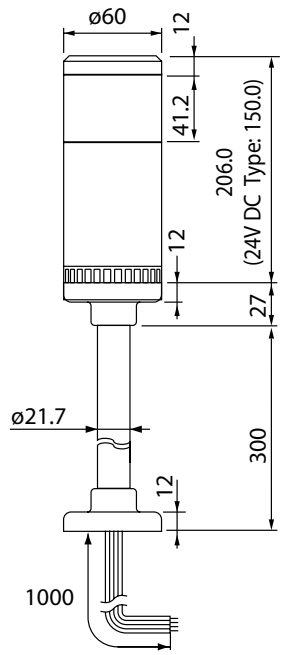


Clear Lens

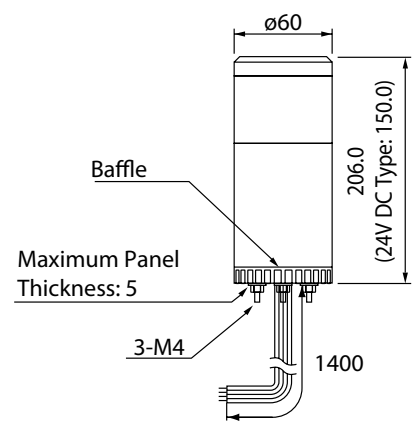
Patlite's new single-tier, multi-color unit is ideally suited for installations requiring a multiple color display but has limited vertical space. The clear lenses are easily distinguishable between lit and unlit lamps, and the unlit look can integrate visually with the equipment it is attached to.

Dimensions (Unit: mm)

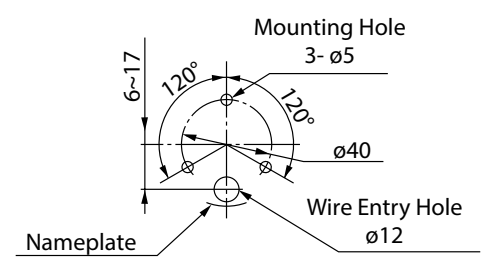
LME Type



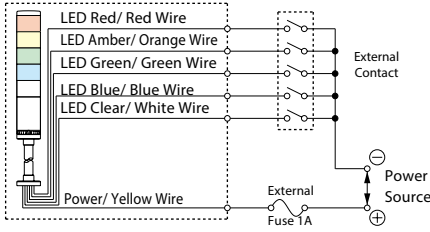
LME-W Type



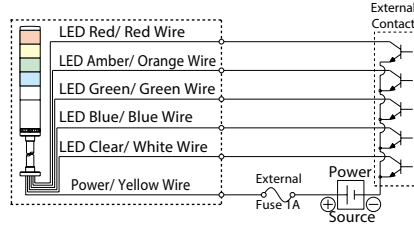
Mounting Dimensions (LME-W)



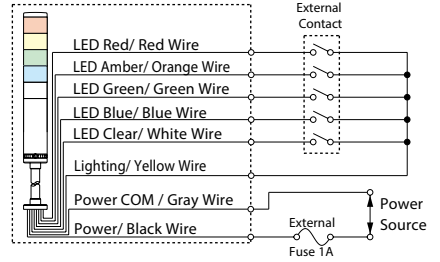
• DC 24V Lighting Type



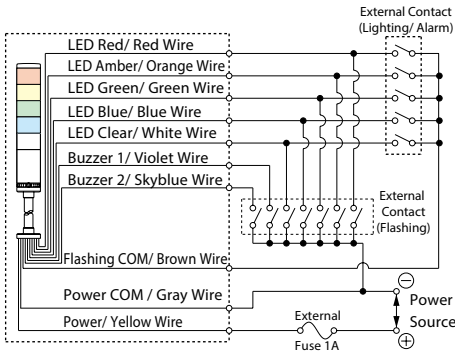
• DC 24V NPN Type



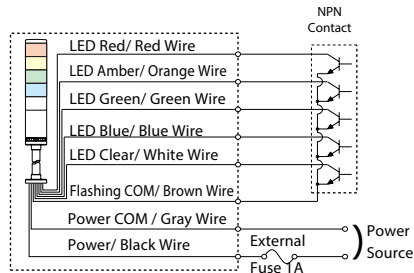
• AC Power Lighting Type



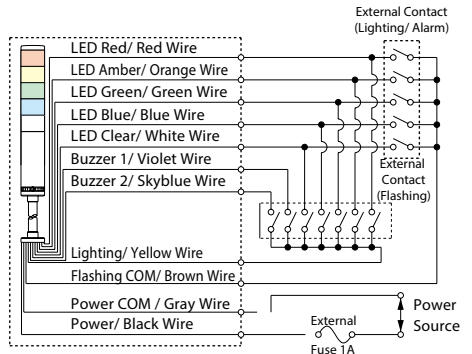
• DC 24V Lighting/Flashing Type



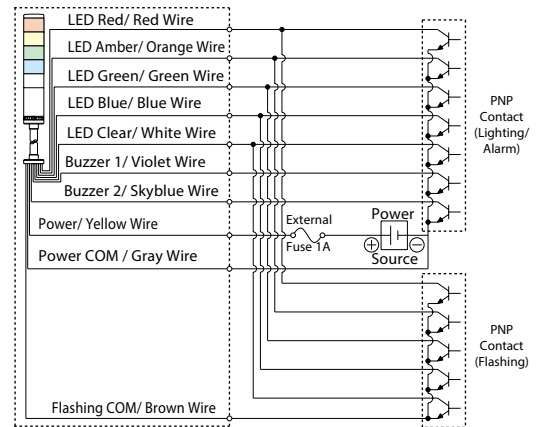
• AC Power NPN Type



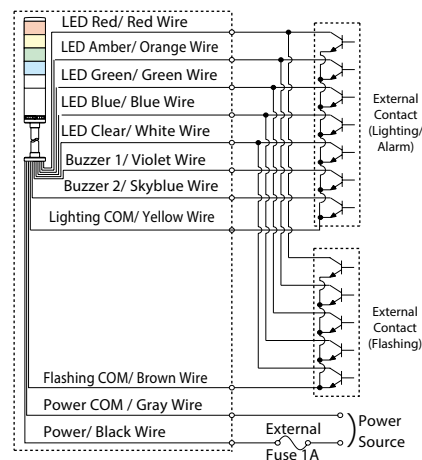
• AC Power Lighting/Flashing Type



• DC 24V NPN FB Type



• AC Power NPN FB Type



LME-S/Q Lead-wire Color Table

| | LED Unit Color | Lead Wire Color |
|----|---------------------------------|----------------------------|
| S1 | Red, Amber, Green | Red, Orange, Green |
| S4 | Red, Green, Blue | Red, Green, Blue |
| S7 | Amber, Green, Blue | Orange, Green, Blue |
| Q1 | Red, Amber, Green, Blue | Red, Orange, Green, Blue |
| Q2 | Red, Amber, Green, Clear/White | Red, Orange, Green, White |
| Q4 | Amber, Green, Blue, Clear/White | Orange, Green, Blue, White |

Signal Line voltage and current per LED Module

| Rated Voltage | Signal Line Voltage | LED | | Alarm | |
|---------------|---------------------|-----------------------------|--------------------------------|---------------------|----------------|
| | | Signal Line Current R, Y | Signal Line Current G, B, C | Signal Line Current | Inrush Current |
| DC 24V | DC 24V | 50mA | 20mA | 40mA | 250mA |
| AC 100V | DC 24V | | | | |
| AC 120V | | | | | |
| AC 200V | | | | | |
| AC 220V | | | | | |
| AC 230V | | | | | |

Lead-wire color coordination table

| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

LMS

Signal Tower



LED



IP65 (K Type: IP54)

Ø60

NPN/PNP
Open-collector



Versatile, cost and energy efficient LED Signal Tower for every need.



Reflection System



High visibility from any angle

FEATURES

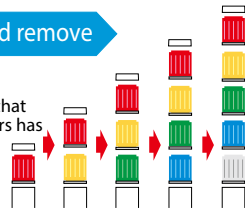
- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Original Dual Reflection System for enhanced light diffusion; creating bright, distinctive illumination while saving energy.
- Pole-mount installation.
- Interchangeable Modules need no re-wiring, even after installation.
- Main body is constructed of ABS resin with superior resistance to impact and heat.
- Lens is made of superior impact resistant and light translucent AS resin.
- Available colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive.
- Is a UL Recognized Component (File No. E215660)

AVAILABLE BY SPECIAL ORDER

- Model LMS-U: Silver Color Body (FB060 type).

Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

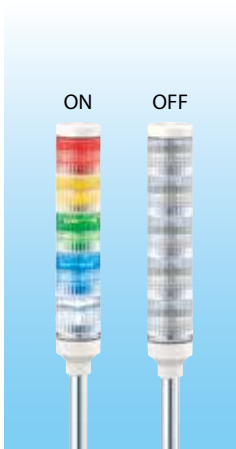
Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.

Note: LED modules of the same color within a signal tower will light up simultaneously.



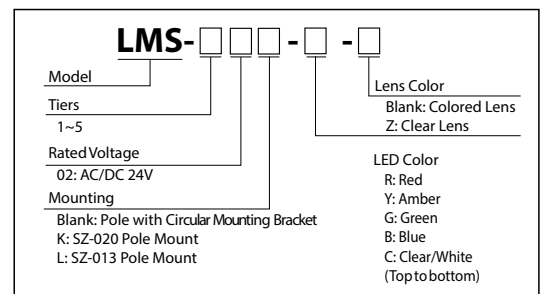
Wiring doesn't change

- The LED Module colors correspond to the wiring, so re-wiring is not necessary.



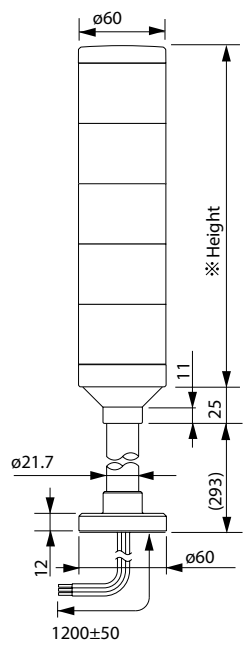
When ordering the clear-lens Signal Tower type, be sure to add "-Z" at the end of the part number when ordering.

How to Order



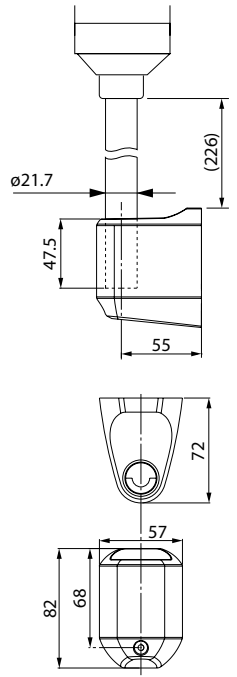
Dimensions (Unit: mm)

LMS

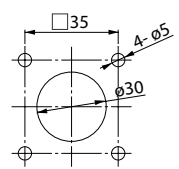


| | |
|----------|---------|
| LMS Type | ※Height |
| 1 Tier: | 69.2 |
| 2 Tiers: | 110.4 |
| 3 Tiers: | 151.6 |
| 4 Tiers: | 192.8 |
| 5 Tiers: | 234.0 |

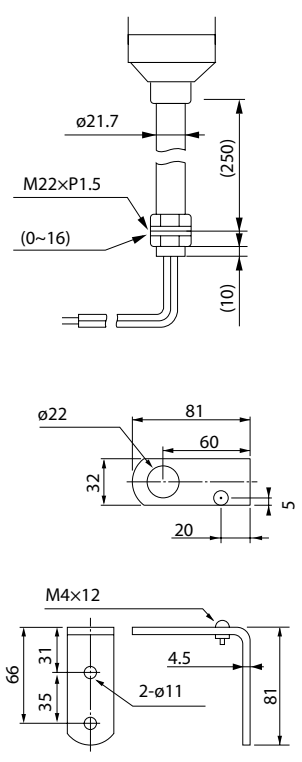
LMS-K



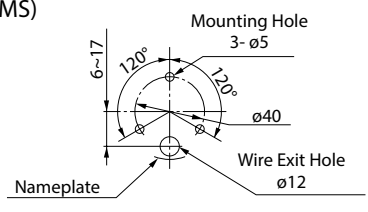
Mounting Dimensions (LMS-K)



LMS-L

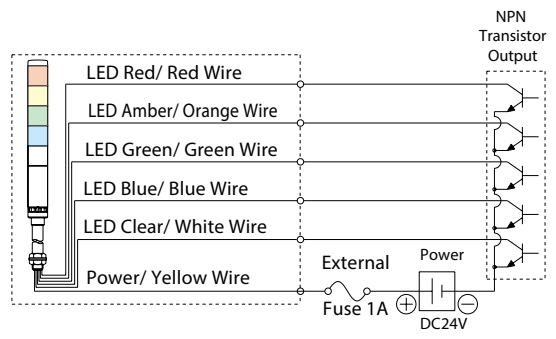


Mounting Dimensions (LMS)

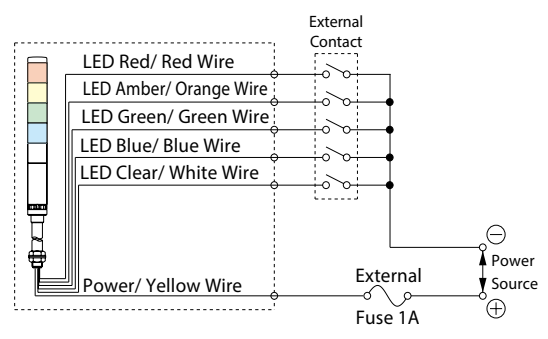


Wiring

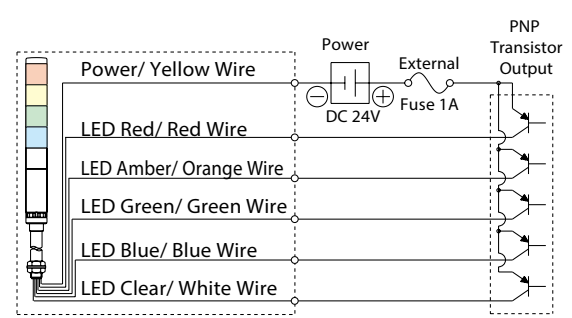
- DC 24V NPN Type



- AC/DC 24V Lighting Type



- DC 24V NPN FB Type



Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass | | |
|--------------|---------|---------------|-------------------|------|-------|-------|
| | | | | LMS | LMS-L | LMS-K |
| 1 Tier | LMS-102 | AC/DC 24V | 1.2W | 290g | 620g | 420g |
| 2 Tiers | LMS-202 | | 2.4W | 340g | 670g | 480g |
| 3 Tiers | LMS-302 | | 2.8W | 390g | 720g | 540g |
| 4 Tiers | LMS-402 | | 3.2W | 440g | 770g | 600g |
| 5 Tiers | LMS-502 | | 3.6W | 490g | 820g | 660g |

LS7

Signal Tower



- LED**
- 2 Alarm Sounds** (FB Type)
- 90dB at 1m** (FB Type)
- IP65** (B Type:IP54)
- Ø70**
- NPN/PNP Open-collector**

New concept!
Smart & smooth signal light body which improves harmony with equipment.

How to Order

LED Signal Tower

LS7- ① 02 ② ③ ④ W ⑤ — ⑥

- ① No. of Lighting Units
3:3 Tiers
5:5 Tiers
- ② Body Color
No Mark:Off-white
D: Dark Gray
S: Silver
- ③ Lighting
No Mark:Illumination Only
F: Illumination·Flashing
- ④ Buzzer
No Mark: No Buzzer
B: Buzzer
- ⑤ Wiring
C:M12 Connector
H:Lead Wires[※]
- ⑥ LED Color
R:Red
Y:Yellow
G:Green
B:Blue
C:White
N:Blank

Ex.: LS7-302WC-RYGNN

- Body Color...Off-white
- Buzzer...None
- LED Colors:Red, Yellow, Green, (Blank), (Blank)
- Lighting...Illumination
- Wiring...M12 Connector

• F type models with Illumination·Flashing are only available for Lead Wire and requires an H mark.
 • C type models (M12 Connector Type) are only available with a continuous sound buzzer.

Specifications

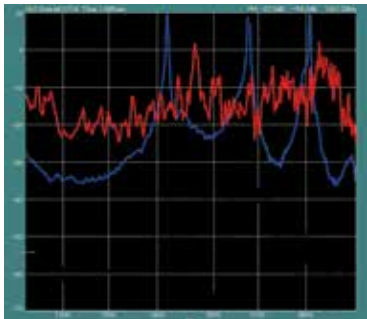
| Model | Number of Lighting Units | Rated Voltage | Mounting | Rated Current Consumption | Maximum Rated Current | Maximum Sound Pressure | Operating Temperature Range | Protection Rating | Mass: | | | |
|---------|--------------------------|---------------|-----------------------|--|--|--|---------------------------------|---|------------------------|----------------------------------|------------------------|-------------|
| | | | | | | | | | Lead-wire Type (H) | | M12 Connector Type (C) | |
| | | | | | | | | | Illumination (No Mark) | Illumination/Flash/2 Alarms (FB) | Illumination (No Mark) | 1 Alarm (B) |
| LS7-302 | 3 Tiers | DC 24V (±10%) | Direct (Indoors Only) | Red: 20mA | Red: 35mA | Buzzer1 ab. 82dB Lead-wire Type (Intermittent Beep1) M12 Connector type (Continuous Beep) | -30°Cto+60°C (Less than 85% RH) | Illumination Type: IP65* Buzzer Type: IP54 | 280g ±10% | 370g ±10% | 260g ±10% | 320g ±10% |
| LS7-502 | 5 Tiers | | | Amber, Green, Blue, Clear/White 30mA Alarm 40mA | Amber, Green, Blue, Clear/White 40mA Alarm 55mA | Buzzer2 ab. 85dB Lead-wire Type (Intermittent Beep2) M12 Connector type (None) | | | | | | |

* IP67 available by special order



A smooth-surfaced body without any metal exposed

By changing the surface of the body into a smoother form, the adhesion of water and dust is reduced. Also, the structure does not have screws, shafts, etc., exposed, which gives comfort for applications in the lithium ion battery manufacturing and food processing industries. And, with the outer lens structure, the risk of environmental stress cracks due to oil mist is reduced. The lens cover is made of shock-resistant polycarbonate.

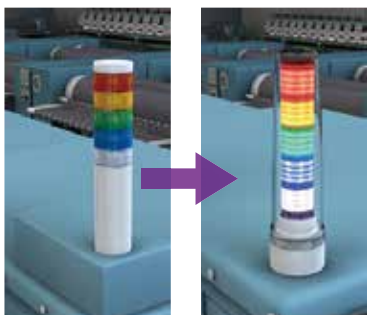


A sound heard throughout various environments

In addition to the existing lead wire, M12 connector quick disconnect is also available. Moreover, when moving to carry and to go out of the device, it is possible to detach it easily with the M12 connector. ^{Speaker Horn (Alarm Type)}

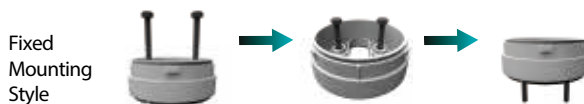


Frequency graph of a metal-working shop sound mixed with buzzer2 alarm. (Inter-corporate Measurement)
* Buzzer1 (H type or C type) is measured at 2000Hz.



Easy attachment, no need for Relay Box

In addition to the conventional three-bolt installation, a two-bolt installation from the upper mount has been added to help make a smoother installation. Therefore, by using the mount as a relay box, it reduces the manufacturing cost for an extra relay box, which used to be a necessity up until now.



M12 Connector Wiring & Tiered Construction

The stackable design and M12 connector quick disconnect (Cable Sold Separate) can drastically reduce labor and time. Moreover, the disconnection and reconnection of the body when removing it to relocate a machine has become smoother.



Stackable Construction



High-contrast Visibility

With the adoption of an inner lens, the LED emits a more efficient light. Moreover, the contrast is increased when the Signal Tower lights up or flashes, with a distinguishable signal color which remarkably improves visibility.

Remarkable display in ANY environment

The LS7 has passed various tests for water resistance, dust, temperature, and variable vibration frequency tests, etc., so that it can endure various environments.

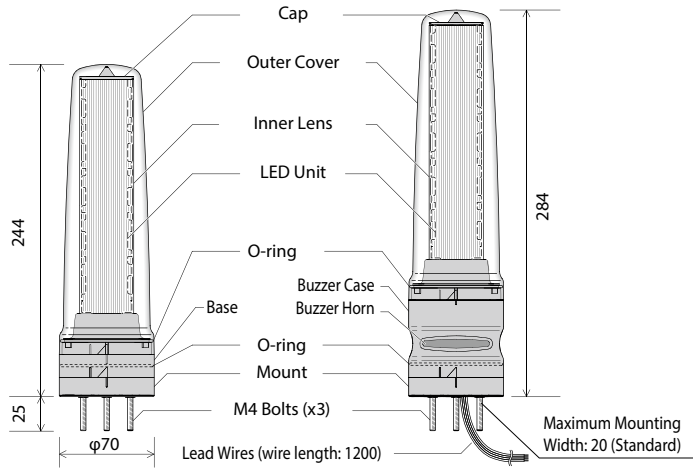


All-plastic Bracket

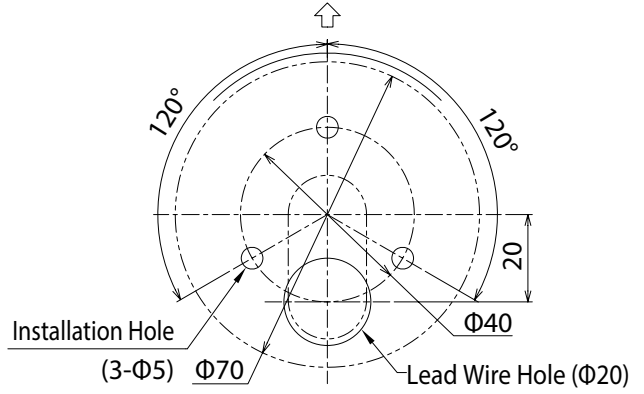
Like the body, the smooth-shaped platform bracket won't collect water or dust. Since no metal parts like screws and shafts are exposed, worries of food tampering can be put to rest in the food process lines.



Dimensions (Unit: mm)



Product Front (Buzzer Horn Direction)



Optional Parts

Like the body, the smooth-shaped platform bracket won't collect water or dust. Since no metal parts like screws and shafts are exposed, worries of food contamination can be put to rest in food processing.

Platform Bracket SZ-100



Wall Mounting Bracket SZ-110

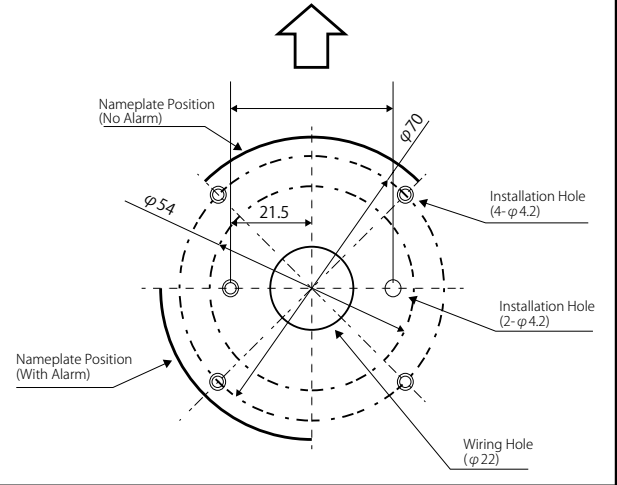


Multi-mount Bracket SZ-130



Multi-mount Bracket SZ-130 Installation Dimensions

Front (Audible Alarm Opening)



M12 Connector & Cable

Manufactured by the OMRON Corp.)

SZ-120-02 Cable Length 2 m (XS2F-D821-DH0-R)

SZ-120-05 Cable Length 5 m (XS2F-D821-GH0-R)

SZ-120-10 Cable Length 10m (XS2F-D821-JH0-R)

*Only for connecting to the LS7.

Replacement Parts



Outer Cover for LS7*

Material: Polycarbonate



O-ring for LS7

Material: Silicone

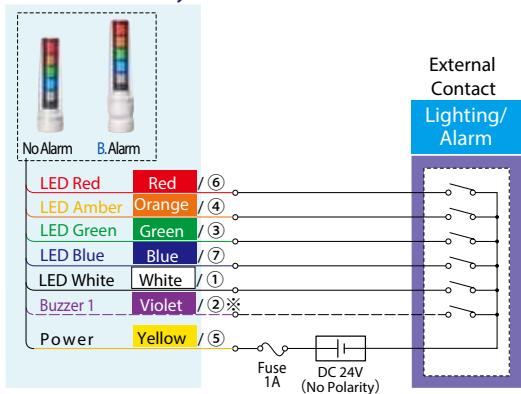


Mount Cover for LS7 (Accessory)

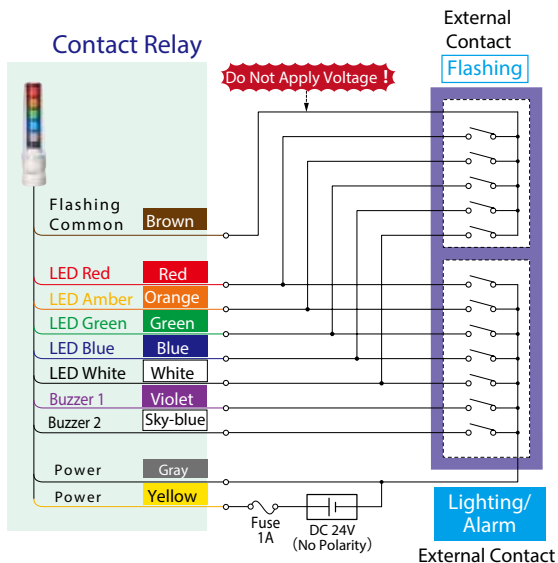
Material: Silicone



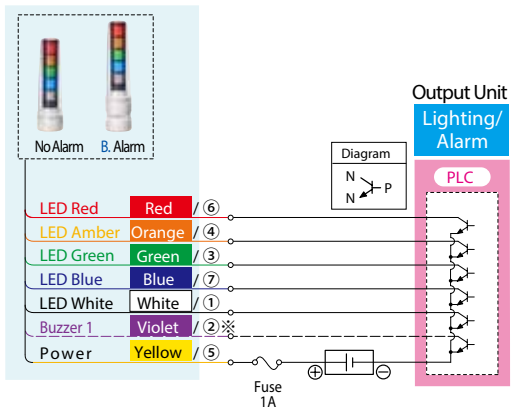
Contact Relay



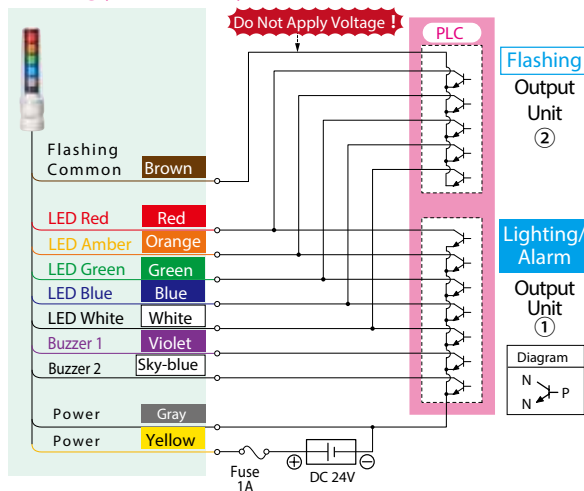
Contact Relay



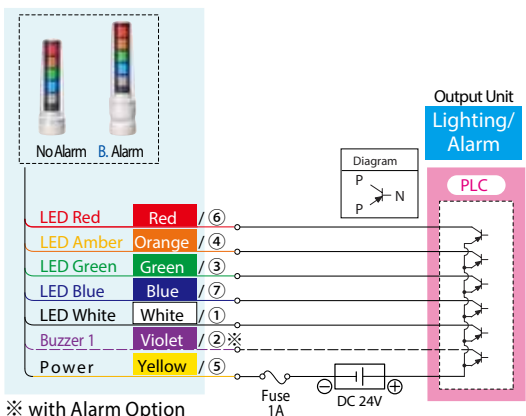
PLC (NPN Transistor)



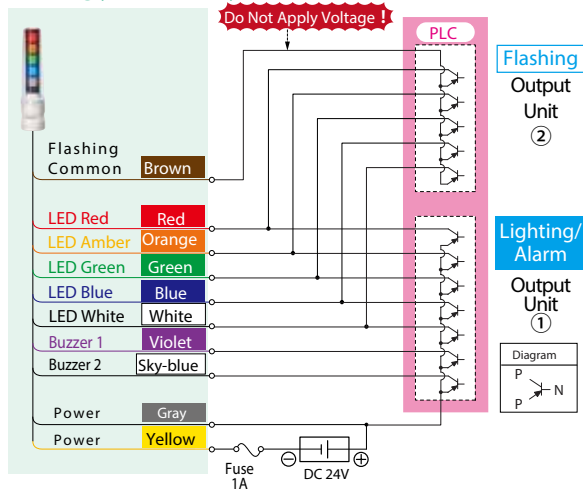
PLC (NPN Transistor)



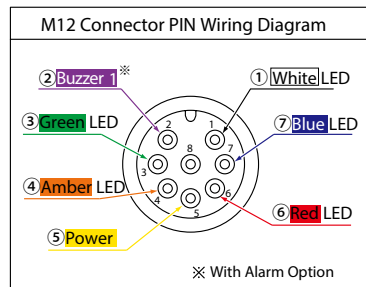
PLC (PNP Transistor)



PLC (PNP Transistor)



※ with Alarm Option



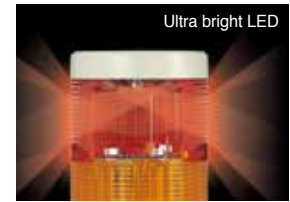
Note: When connecting the PLC outputs for illumination and flashing functions, the wiring (Common Wires) has to be separate between the flashing and non-flashing circuits.

PATLITE's LU5 & LU7 Series signal towers deliver the advantages of superior LED technology, innovative design, and the convenience of modular assembly with only 9 basic modular components to meet just about every indicating need.



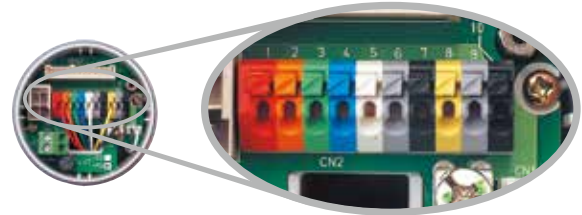
Ultra Bright LEDs combined with an Innovative Prism Lens Design

Allows the light emitted from the signal tower to be seen from greater distances. This also allows for use of a smaller diameter light, reducing the cost of the light tower.



Color-coordinated & Spring-loaded Terminal Block

Makes wiring easy and more reliable compared to screw-type connections. Each color corresponds to the color of the LED module to be used.



Wiring Terminals

Two user-selectable Alarms Integrated in the Base Module

Allows sound to enhance the critical nature of a visual signal, bringing more attention to certain conditions. Also, since the modules are built into the base, up to 5 LED modules can be used on the light tower.



ADJUSTABLE VOLUME

Delivers Sounds up to 90dB (at 1 m)

Alarm can be easily heard over ambient noise.

Modular Design

Makes it easy to configure and assemble a light tower. Modules can be put away before shipping the machine, reducing shipping and crate costs.



Modular Construction

O-rings

Seal out liquids so that the tower achieves an IP65 rating allowing the tower to be used in wet conditions.



IP65 Protection

IP65 & IP66 with Optional Cable Gland

The O-rings seal the tower from liquids so that an IP65 rating can be achieved to allow the tower to be used in wet environments. Adding a Cable Gland (user supplied) the tower's IP rating is increased to IP66.





LU7

LU7

Signal Tower



2 Alarm Sounds (FB Type)

IP65

Ø70

**NPN/PNP
Open-collector**

Versatile modular Signal Tower featuring easy assembly and wiring designed for every need.

FEATURES

- PATLITE's exclusive hybrid prism-cut lens designed for enhanced visibility from any direction and distance.
- Two built-in alarms (FB type)
- Adjustable volume of up to 90dB (at 1m).
- Direct mount installation is standard; pole-mount is available with the optional mounting pole.
- Color-coordinated Terminal block corresponding to the lens colors for quick wiring and verification.
- Interchangeable LED Modules requires no re-wiring, even after installation.
- Lens is made of superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Module Colors are in Red, Amber, Green, Blue, and Clear/White.
- Available Base colors are in Black, Silver and Ivory White.
- Conforms to the CE requirements (for 24V type).
- Is a UL Recognized Component (File No. E215660).
- Product Shipped in a modular style for customer's customized assembly.

How to Order









| | |
|-----------------|----------------|
| LED Module | |
| LU7-E-R | |
| Model | Color |
| | R: Red |
| | Y: Amber |
| | G: Green |
| | B: Blue |
| | C: White/Clear |
| Unit | |
| E : LED Unit | |
| XE: Strobe Unit | |

| | | | |
|-------------------|-------------------------|-------------------|-------------------------|
| Long Base Unit | | Short Base Unit | |
| LU7-02UFB | | LU7-02SUFB | |
| Model | Type | Model | Type |
| | Blank: Continuous light | | Blank: Continuous light |
| | FB: Flashing/ Alarm | | FB: Flashing/ Alarm |
| Rated Voltage | Base Color | Rated Voltage | Base Color |
| 02: DC 24V | Blank: Ivory White | 02: DC 24V | Blank: Ivory White |
| M2: AC 100 - 240V | U : Silver | M2: AC 100 - 240V | U : Silver |
| | K : Black | | K : Black |

Specifications (Base)

LU7 Base Units

| Model | LU7-02S | LU7-02 | LU7-02FB | LU7-02M2 | LU7-02M2FB | Unit Color Variation | | | |
|-----------------------------|---------------------------------|--|------------|--------------------------|--|----------------------|---|---|---|
| Rated Voltage | DC 24V | | | AC 100 to 240V (50/60Hz) | | Short Body | | | |
| Operating Voltage Range | DC 21.6 - 26.4V | | | AC 90 to 250V (50/60Hz) | | Ivory White | Silver | Black | |
| Alarm | — | Buzzer 1* | Buzzer 2** | — | Buzzer 1* | Buzzer 2** |  |  |  |
| Current Consumption | — | 50±10mA | 24±10mA | — | 50±10mA | 24±10mA | LU7-02S | LU7-02SU | LU7-02SK |
| Power Consumption | — | 1.2±0.25W | 0.58±0.25W | — | 1.8±0.25W | 1.3±0.25W | Standard Body | | |
| Sound Level | — | Max: 90±5dB (at 1m) Min: 70dB or less (at 1m) | | — | Max: 90±5dB (at 1m) Min: 70dB or less (at 1m) | |  |  |  |
| Flash Cycle | — | 60±12 flashes per minute | | — | 60±12 flashes per minute | | LU7-02/M2 | LU7-02U/M2U | LU7-02K/M2K |
| Operating Temperature Range | -30°C to +60°C | | | -25°C to +55°C | | | | | |
| Mounting Direction | Upright, Indoor Only | | | | | | | | |
| Protection Rating | IP65 (IP66 with Cable Gland***) | | | | | | | | |
| Mass (±10%) | 150g | 250g | 280g | 310g | 340g | | | | |
| Open Collector | PNP/NPN | | | | NPN | | | | |

*Buzzer 1: Continuous **Buzzer 2: Intermittent ***Cable Gland to be supplied by user

Specifications (Module)

LU7 LED Units*

| Model | LU7-E-R | LU7-E-Y | LU7-E-G | LU7-E-B | LU7-E-C |
|-----------------------------|-----------------|----------------|----------------|---------------|----------------------|
| Unit /LED Color | LED Unit Red | LED Unit Amber | LED Unit Green | LED Unit Blue | LED Unit White/Clear |
| Rated Voltage | DC 24V | | | | |
| Operating Voltage Range | DC 21.6 - 26.4V | | | | |
| Current/Power Consumption | 52mA/1.25W | | 42mA/1.0W | | |
| Operating Temperature Range | -30°C to +60°C | | | | |
| Mass (±10%) | 60g | | | | |

*Operates on LU7-02, LU7-02FB, LU7-M2 and LU7-M2FB Base Units

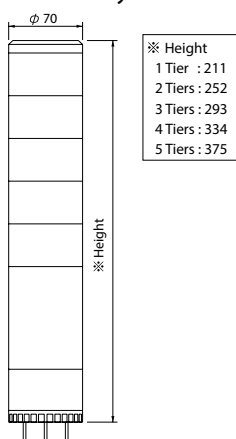
LU7 LED Strobe Units**

| Model | LU7-XE-R | LU7-XE-Y | LU7-XE-G | LU7-XE-B | LU7-XE-C |
|---------------------|--------------|----------------|----------------|---------------|----------------------|
| Unit Color | LED Unit Red | LED Unit Amber | LED Unit Green | LED Unit Blue | LED Unit Clear/White |
| Rated Voltage | DC 24V | | | | |
| Current Consumption | 290mA | | 140mA | 270mA | 280mA |
| Mass (±10%) | 70g | | | | |

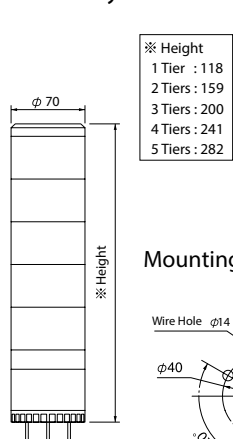
**Operates with LU7-02, LU7-02S, and LU7-02FB bases only. When using with LU7-02FB, the module should be controlled by the continuous common wire.

Dimensions (Unit: mm)

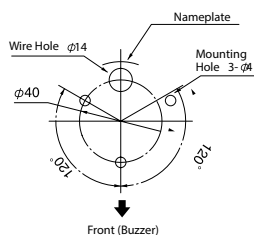
LU7 Standard Body



LU7-02S Short Body



Mounting Dimensions



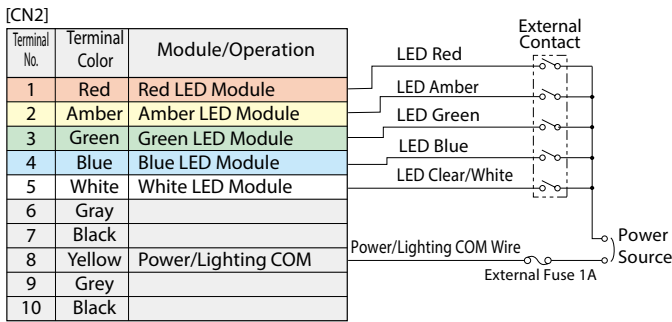
Wiring

External Contact Capacity

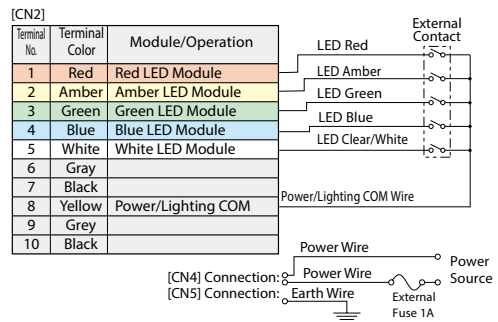
| Specifications | | DC 24V | AC 100 - 240V |
|-----------------------|---------------------|---|-------------------------------------|
| LED Unit (1 Unit) | Current Consumption | Red,Amber: 52mA Green,Blue,White/Clear: 42mA | |
| | Contact Capacity | Is≥100mA, Vs≥AC 35V | |
| Alarm | Current Consumption | 50mA | |
| | Inrush Current | 100mA | |
| Power Supply | Contact Capacity | Is≥100mA, Vs≥AC 35V | |
| | Current Consumption | 360mA | 40mA (250VAC) - 110mA (90VAC) |
| External Contact Fuse | Contact Capacity | Is≥500mA Vs≥AC 35V | 9A (90V) - 25A (250V) Vs≥AC 250V |

| Voltage | Fuse Amperage Rating |
|------------|----------------------|
| All Models | 250V, 1A |

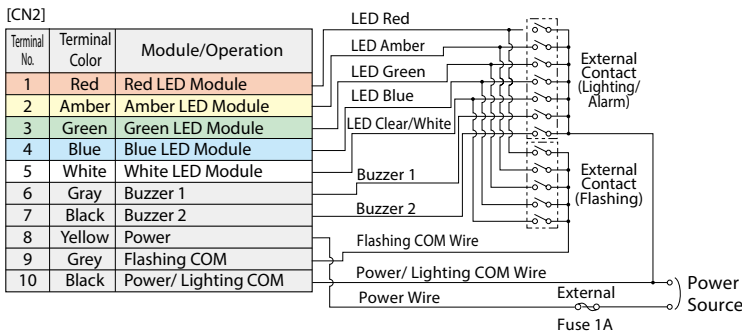
AC/DC 24V Lighting Type



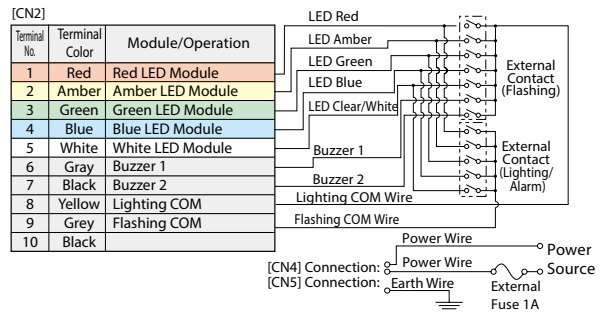
AC Power Lighting Type



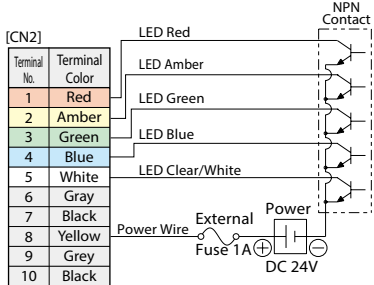
AC/DC 24V Lighting/Flashing Type



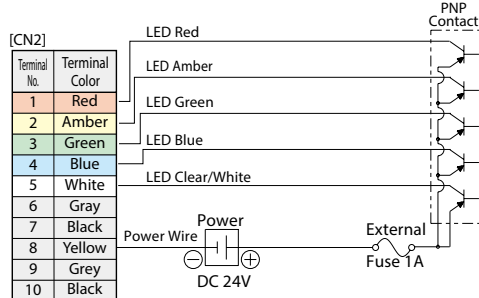
AC Power Lighting/Flashing Type



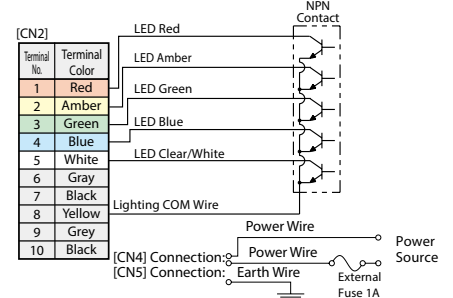
DC 24V NPN Type



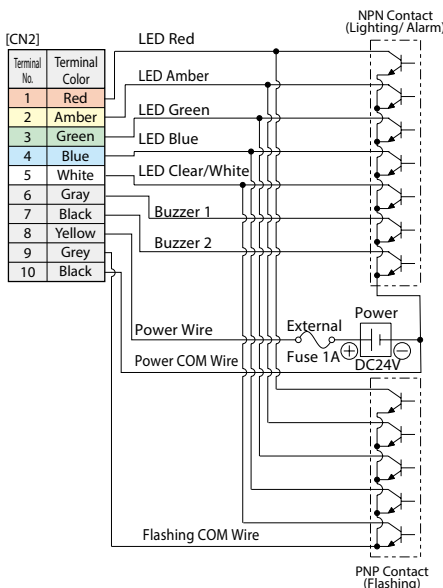
DC 24V PNP Type



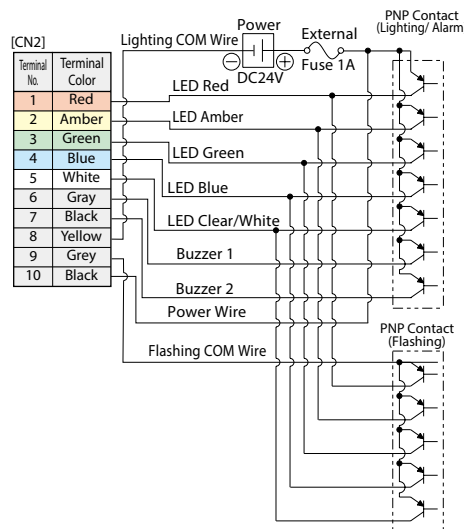
AC Power NPN Type



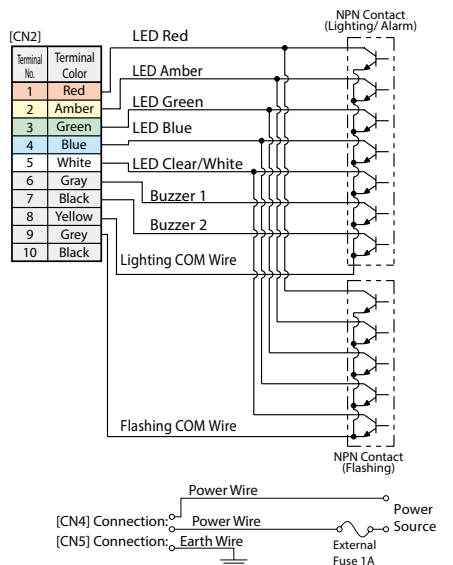
DC 24V NPN FB Type



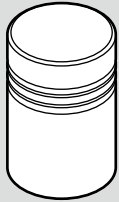
DC 24V PNP FB Type



AC Power NPN FB Type



Voice and Alarm Module



| | | |
|--------------------------|--------------|--------------------------|
| Model | LU7-LB | LU7-V1 |
| Type | Alarm Module | Voice Synthesizer Module |
| Rated Voltage | 24V DC | 24V DC |
| Power Consumption | 3.6W | 3.5W |
| Mass (±10%) | 140g | 170g |

LED Units



| | | | | | |
|------------------------------------|------------------------------------|---------|------------|---------|---------|
| Model | LU7-E-R | LU7-E-Y | LU7-E-G | LU7-E-B | LU7-E-C |
| Unit Color | | | | | |
| Rated Voltage | 24V DC | | | | |
| Operating Voltage Range | Rated Voltage±10% (21.6 ~ 26.4V) | | | | |
| Current/Power Consumption | 52mA/1.25W | | 30mA/0.72W | | |
| Operating Temperature Range | -30°C ~ +60°C | | | | |
| Mass (±10%) | 60g | | | | |

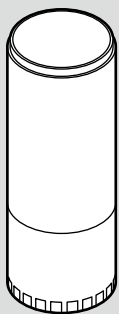
LED Strobe Module



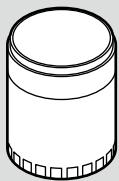
| | | | | | |
|--------------------------|----------|----------|----------|----------|----------|
| Model | LU7-XE-R | LU7-XE-Y | LU7-XE-G | LU7-XE-B | LU7-XE-C |
| Unit Color | | | | | |
| Rated Voltage | 24V DC | | | | |
| Power Consumption | 290mA | 290mA | 140mA | 270mA | 280mA |
| Mass (±10%) | 70g | | | | |

- RED
- AMBER
- GREEN
- BLUE
- CLEAR/WHITE

Base Units



Standard Body



Short Body

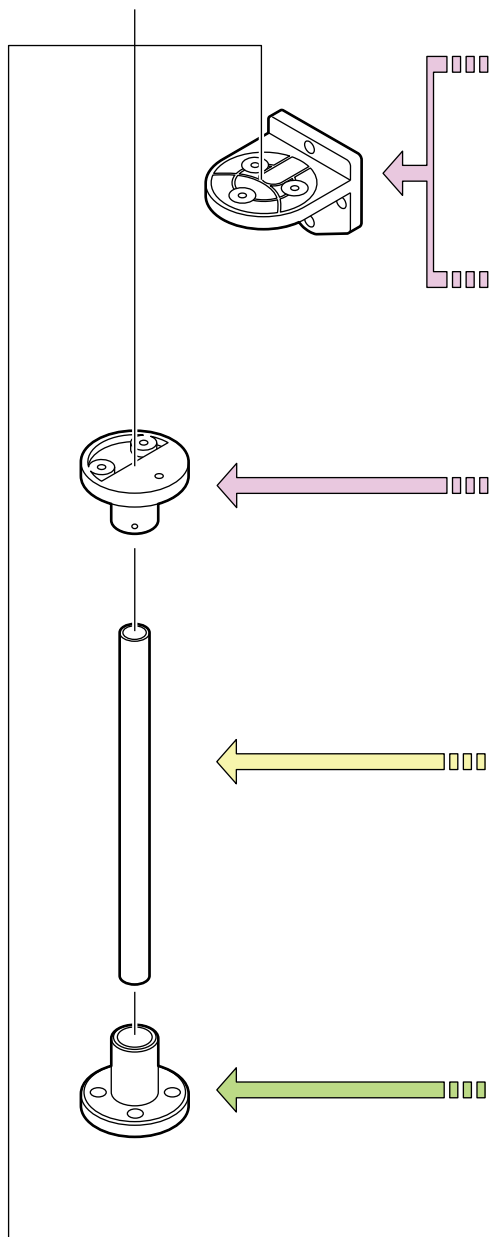
| | | | | | | |
|------------------------------------|------------------------------------|--|------------|-----------------------|--|--|
| Model | LU7-02S | LU7-02 | LU7-02FB | LU7-M2 | LU7-M2FB | |
| Color | | | | | | |
| Base Type | Short | Standard | | Standard | | |
| Rated Voltage | 24V DC | | | 90 ~ 250V (50/60Hz) | | |
| Operating Voltage Range | Rated Voltage±10% (21.6 ~ 26.4V) | | | 90 ~ 250V (50/60Hz) | | |
| Alarm | - | *Buzzer 1 | **Buzzer 2 | - | *Buzzer 1 **Buzzer 2 | |
| Current Consumption | - | 50±10mA | 24±10mA | - | 50±10mA 24±10mA | |
| Power Consumption | - | 1.2±0.25W | 0.58±0.25W | - | 1.8±0.25W 1.3±0.25W | |
| Sound Level | - | Max:90±5dB (at 1m) Min:70dB or Less (at 1m) | | - | Max:90±5dB (at 1m) Min:70dB or Less (at 1m) | |
| Flashing Cycle | - | 60±12 flashes per minute | | - | 60±12 flashes per minute | |
| Operating Temperature Range | -30°C ~ +60°C | | | -25°C ~ +55°C | | |
| Mounting Direction | Upright, Indoor only | | | Upright, Indoor only | | |
| Protection Rating | IP65 | | | IP65 | | |
| Mass (±10%) | 150g | 250g | 280g | 310g | 340g | |
| Open Collector | PNP/NPN | | | NPN | | |

* Buzzer 1 : Continuous Sound **Buzzer 2 : Intermittent Sound

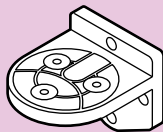
- Ivory White
- Silver (U)
- Black (K)

Optional Parts

Optional Parts

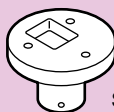


Wall Mount Bracket



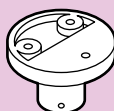
| | | | |
|-------|-------------|--------------|-------------|
| Model | SZ-18 | SZ-18U | SZ-18K |
| Color | Ivory White | Silver (U) | Black (K) |

Upper Bracket



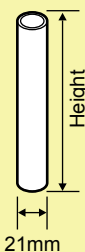
SZ-50NPT (For 1/2" NPT Pole)

Upper Bracket



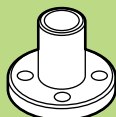
| | | | |
|-------|-------------|--------------|-------------|
| Model | SZ-50-U | SZ-50U-U | SZ-50K-U |
| Color | Ivory White | Silver (U) | Black (K) |

Pole

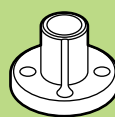


| Pole | Length | | |
|---------------|-------------|-------------|-------------|
| | 800mm | 300mm | 100mm |
| Aluminum Pole | | | |
| Model | POLE-800A21 | POLE-300A21 | POLE-100A21 |
| Steel Pole | | | |
| Model | POLE-800S21 | POLE-300S21 | POLE-100S21 |
| Black Pole | | | |
| Model | POLE-800B21 | POLE-300B21 | POLE-100B21 |

Mounting Bracket



SZ-016A
(For φ21.7mm Pole)



SZ-70-B
(For φ21.7mm Aluminium Pole Only)

Wall Mount Bracket

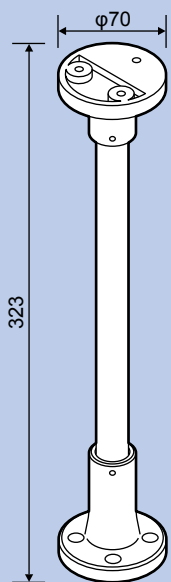


SZ-020
(For φ21.7mm Pole)

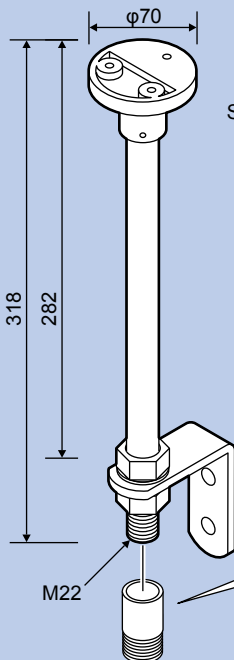


SZ-017
(For φ21.7mm Pole)

Pre-assembled

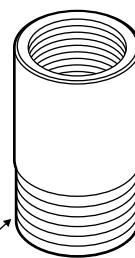


SZ-50T



SZ-50L

Adaptor



SZ-904

For 3/4" NPT



LU7-V1

Signal Tower



- 4 Messages (MP3)
- 80dB at 1m
- IP65
- Ø70
- NPN Open-collector

Omni-directional MP3 Smart Alert Module (LU7-V1)

FEATURES

- Volume adjustable from 9dB to 80dB at 1m (depends on type of sound or message)
- High quality MP3 supported voice and sound module replays up to 4 alarms or messages with 32 seconds of total program time
- Playback sound selected by the position of internal jumper pin
- MP3 data is recorded before shipment of order
- CE compliant

Stackable audible alarm

- Can be used with LU7-02(FB), LU7-M2(FB), and LU7-02S(B).
- Easily mounted at the top of the light stack.

Diagram 1. Sound Direction

How to Order

LED Sound Module

LU7-V1

Model Unit

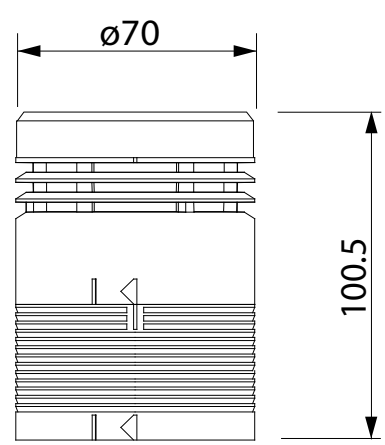
V1: Voice Module

Selectable playback sound

• The jumper position determines the sound

LU7-V1

Dimensions (Unit: mm)



Specifications

| Model | Type | Rated Voltage | Rated Current | Power Consumption | Mass |
|--------|-----------------|---------------|---------------|-------------------|------|
| LU7-V1 | MP3 Sound Alarm | DC 24V | - | 3.5W | 170g |

LU7-XE

Signal Tower

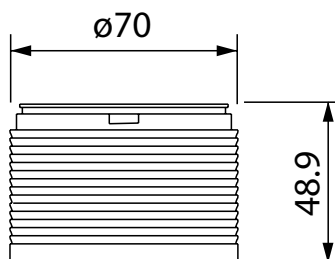


Stackable LED strobe module saves energy and requires low maintenance.

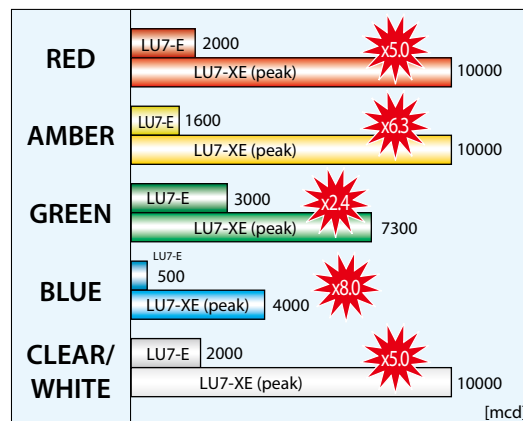
FEATURES

- Application* can be used with the LU7 Series Signal Tower.
 - A visually stunning double-flash light pattern for immediate attention.
 - Incorporates super-bright LED technology for enhanced visibility.
 - Easily stackable and interchangeable, before or after installation.
 - Has the CE mark and conforms to the requirements for the EC directive.
 - Is UL Listed (File No. E215660) for use with LU7-02 and LU7-02FB.
- (1) For use with LU7-02, LU7-02S, and LU7-02FB bases only.
 Note: When using with LU7-02FB, the module should be controlled by the continuous common wire.

Dimensions (Unit: mm)



Brightness Comparison



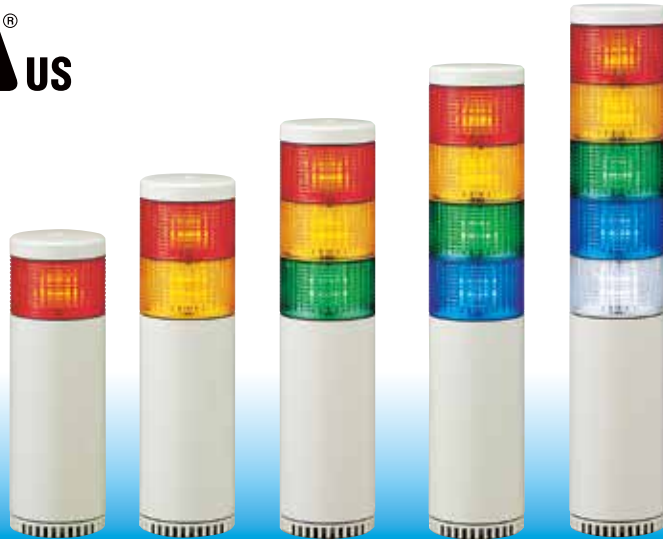


LHE-A

Signal Tower



- LED**
- 2 Alarm Sounds** (FB Type)
- 90dB at 1m** (FB Type)
- IP65** (FB Type:IP54)
- Ø70**
- NPN Open-collector**



The Signal Tower with a water resistant design for wet environments.



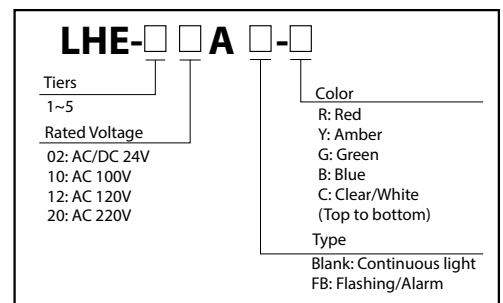
Dual Reflection System

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and five color LED modules, creates a bright and evenly distributed illumination.

FEATURES

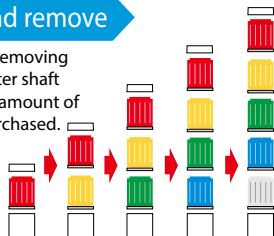
- Original LED reflection system to improve brightness and provide maintenance-free operation.
- Two built-in alarms (FB type)
- Adjustable volume of up to 90dB (at 1m).
- Direct mount installation is standard; pole-mount is available with the optional mounting pole.
- Interchangeable Modules need no re-wiring, even after installation.
- Lens is made of superior impact and heat resistant AS resin for superior durability and light transmission.
- Available colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive. (for 24V type)
- Is a UL Recognized Component (File No. E215660, for 24V type only).

How to Order



Easy to add and remove

- When adding or removing modules, the center shaft that matches the amount of tiers has to be purchased.



Interchangeable LED Modules

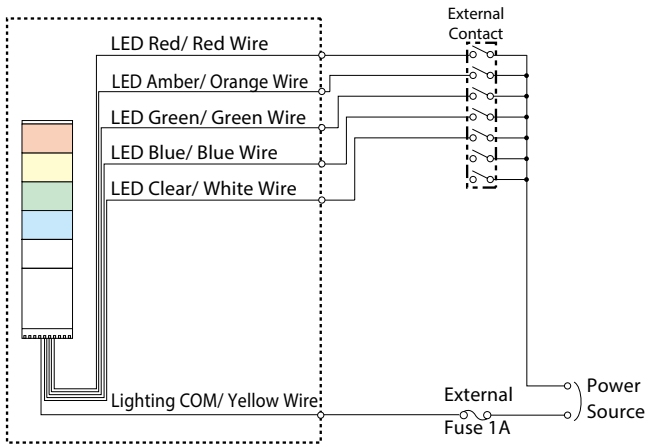
- Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.
Note: LED modules of the same color within a signal tower will light up simultaneously.



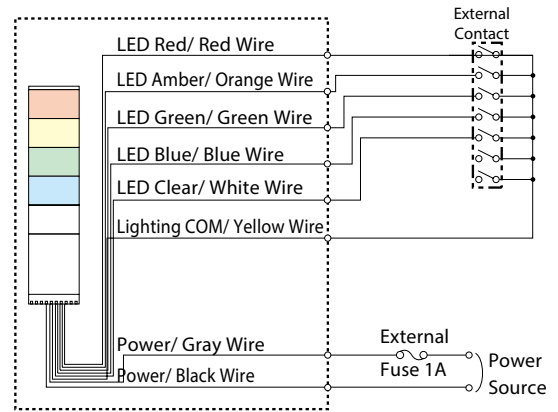
Wiring doesn't change

- The LED Module colors correspond to the wiring, so re-wiring is not necessary.

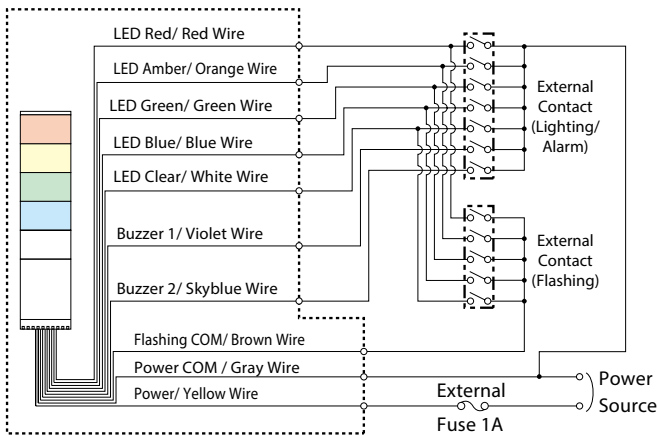
AC/DC 24V Lighting Type



AC Power Lighting Type



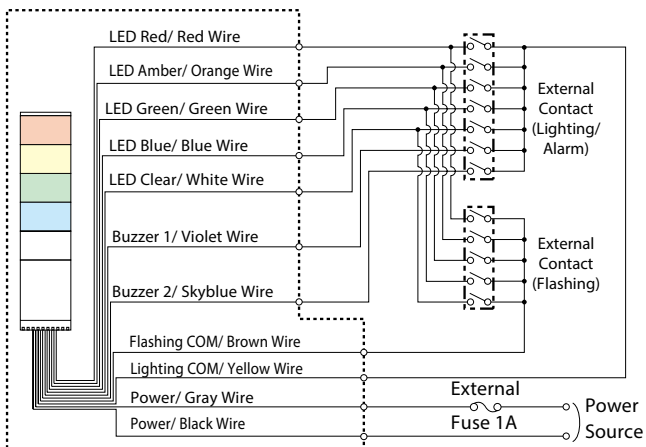
AC/DC 24V Lighting/Flashing Type



Signal Line voltage and current per LED Module

| Rated Voltage | Signal Line Voltage | LED | | Alarm | |
|---------------|---------------------|------|---------|---------------------|----------------|
| | | R, Y | G, C, B | Signal Line Current | Inrush Current |
| AC/DC 24V | AC/DC 24V | 50mA | 40mA | 40mA | 150mA |
| AC 100V | DC 24V | 50mA | 40mA | | |
| AC 120V | | | | | |
| AC 220V | | | | | |

AC Power Lighting/Flashing Type



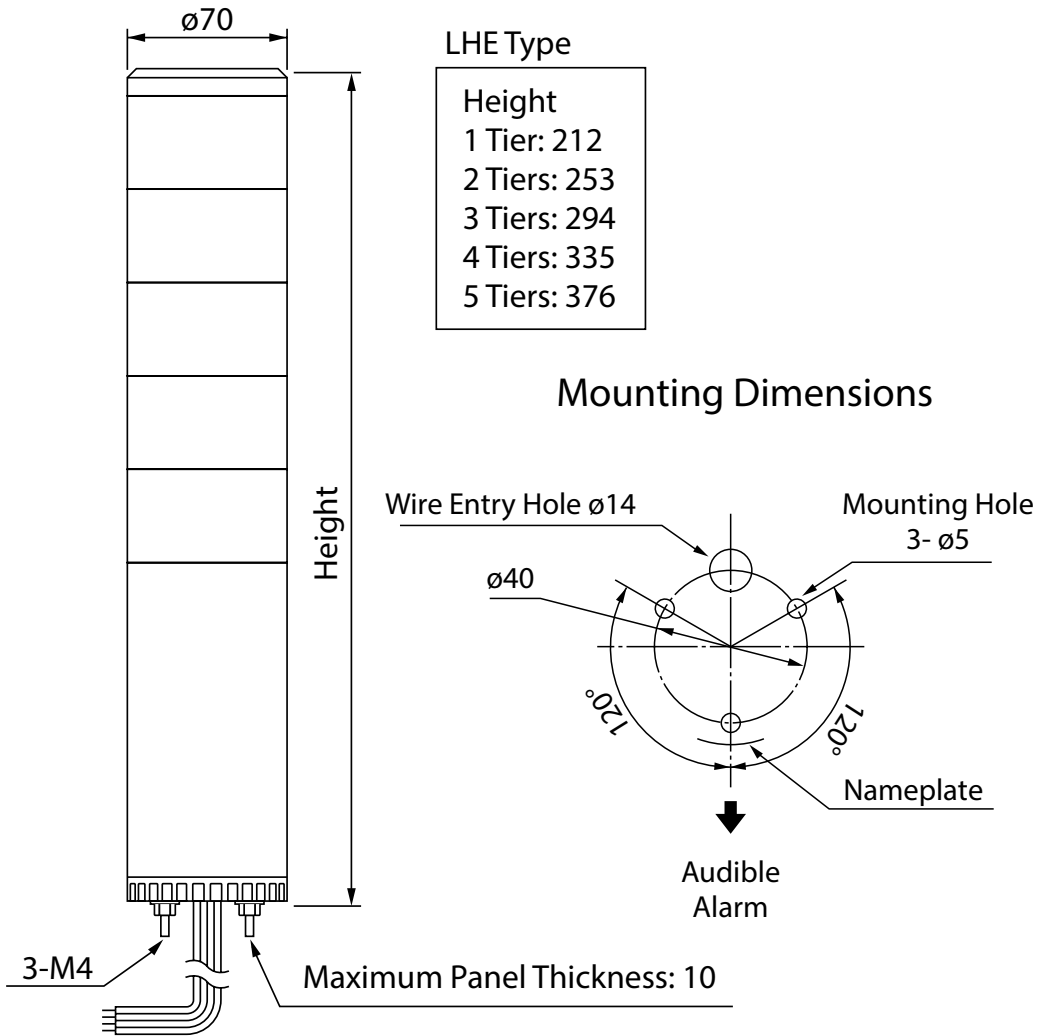
Lead-wire color coordination table

| LED Unit Color | Lead Wire Color |
|----------------|-----------------|
| Red | Red |
| Amber | Orange |
| Green | Green |
| Blue | Blue |
| Clear/White | White |

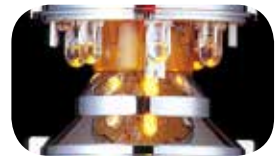
| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

Dimensions (Unit: mm)

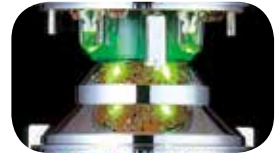
"Super Bright" LED provides the highest level of visibility.



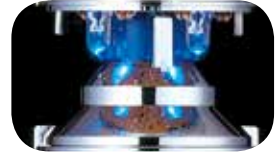
RED



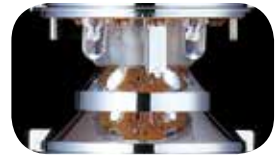
AMBER



GREEN



BLUE



CLEAR/WHITE

Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass |
|--------------|---------------|---------------|-------------------|------|
| 1 Tier | LHE -102A/AFB | AC/DC 24V | 2.2W | 400g |
| | LHE -110A/AFB | AC 100V | 4.7W | 650g |
| | LHE -112A/AFB | AC 120V | | |
| | LHE -120A/AFB | AC 220V | | |
| 2 Tiers | LHE -202A/AFB | AC/DC 24V | 3.4W | 450g |
| | LHE -210A/AFB | AC 100V | 6.4W | 700g |
| | LHE -212A/AFB | AC 120V | | |
| | LHE -220A/AFB | AC 220V | | |
| 3 Tiers | LHE -302A/AFB | AC/DC 24V | 4.4W | 500g |
| | LHE -310A/AFB | AC 100V | 7.9W | 750g |
| | LHE -312A/AFB | AC 120V | | |
| | LHE -320A/AFB | AC 220V | | |
| 4 Tiers | LHE -402A/AFB | AC/DC 24V | 5.4W | 550g |
| | LHE -410A/AFB | AC 100V | 9.4W | 800g |
| | LHE -412A/AFB | AC 120V | | |
| | LHE -420A/AFB | AC 220V | | |
| 5 Tiers | LHE -502A/AFB | AC/DC 24V | 6.4W | 600g |
| | LHE -510A/AFB | AC 100V | 10.9W | 850g |
| | LHE -512A/AFB | AC 120V | | |
| | LHE -520A/AFB | AC 220V | | |



- LED**
- 1 Alarm Sound** (FB Type)
- 85dB** at 1m
- IP54**
- Ø100**
- NPN/PNP**
Open-collector

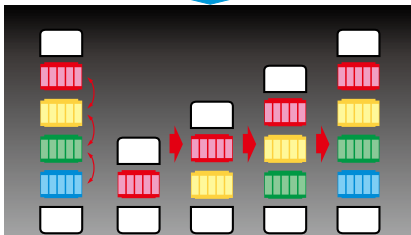
Large Signal Tower featuring enhanced visibility and downward illumination, designed for large machines.

Triple Reflection System



PATLITE's triple-reflection system creates an even brighter and distinctive illumination with its exclusive hybrid prism-cut lens for 5 color LED module variations.

Interchangeable LED Modules



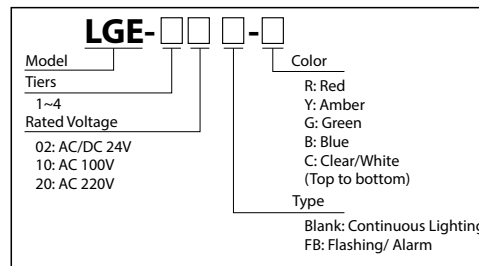
LED Tiers are changeable, even after installation.

Note: Shafts that match the number of tiers also has to be purchased.

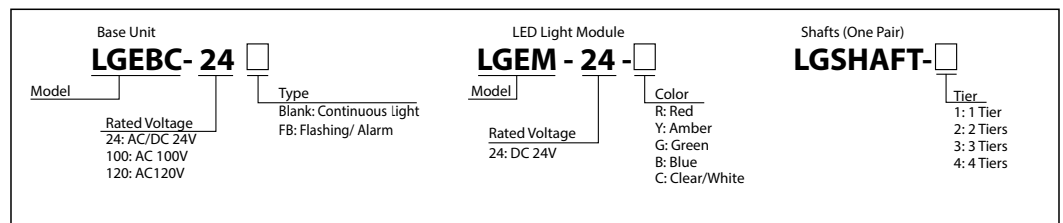
FEATURES

- PATLITE's large prism cut lens to enhance illumination in the downward direction. (Lens Size: ϕ 100mm x 60mm high)
- The FB type offers a flashing and continuous lighting pattern.
- A built-in buzzer (FB type) has a sound of up to 85dB (at 1m).
- Direct mount Installation.
- Interchangeable Modules need no re-wiring, even after installation.
- Lens is made of superior impact and heat resistant polycarbonate resin for superior durability and illumination.
- Both NPN and PNP compatible for the DC24V type; NPN compatible with the AC 100/220V type only.
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive. (for 24V type)

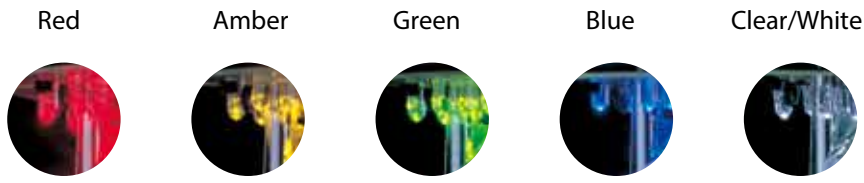
How to Order (Pre-assembled)



How to Order (Module)



5 "Super Bright" LED Colors to choose from!



Specifications (Pre-assembled)

| (No Alarm) | | | | |
|--------------|---------|---------------|-------------------|-------|
| Light System | Model | Rated Voltage | Power Consumption | Mass |
| 1 Tier | LGE-102 | AC/DC 24V | 2.0W | 0.4kg |
| | LGE-110 | AC 100V | 5.2W | 1.0kg |
| | LGE-120 | AC 220V | | |
| 2 Tiers | LGE-202 | AC/DC 24V | 4.0W | 0.6kg |
| | LGE-210 | AC 100V | 7.7W | 1.2kg |
| | LGE-220 | AC 220V | | |
| 3 Tiers | LGE-302 | AC/DC 24V | 6.0W | 0.8kg |
| | LGE-310 | AC 100V | 10.2W | 1.4kg |
| | LGE-320 | AC 220V | | |
| 4 Tiers | LGE-402 | AC/DC 24V | 8.0W | 0.9kg |
| | LGE-410 | AC 100V | 12.7W | 1.5kg |
| | LGE-420 | AC 220V | | |

| Alarm Type (Intermittent Rate: ab. 60 beeps per min) | | | | |
|--|-----------|---------------|-------------------|-------|
| Light System | Model | Rated Voltage | Power Consumption | Mass |
| 1 Tier | LGE-102FB | AC/DC 24V | 2.5W | 0.4kg |
| | LGE-110FB | AC 100V | 5.7W | 1.0kg |
| | LGE-120FB | AC 220V | | |
| 2 Tiers | LGE-202FB | AC/DC 24V | 4.5W | 0.6kg |
| | LGE-210FB | AC 100V | 8.2W | 1.2kg |
| | LGE-220FB | AC 220V | | |
| 3 Tiers | LGE-302FB | AC/DC 24V | 6.5W | 0.8kg |
| | LGE-310FB | AC 100V | 10.7W | 1.4kg |
| | LGE-320FB | AC 220V | | |
| 4 Tiers | LGE-402FB | AC/DC 24V | 8.5W | 0.9kg |
| | LGE-410FB | AC 100V | 13.2W | 1.5kg |
| | LGE-420FB | AC 220V | | |

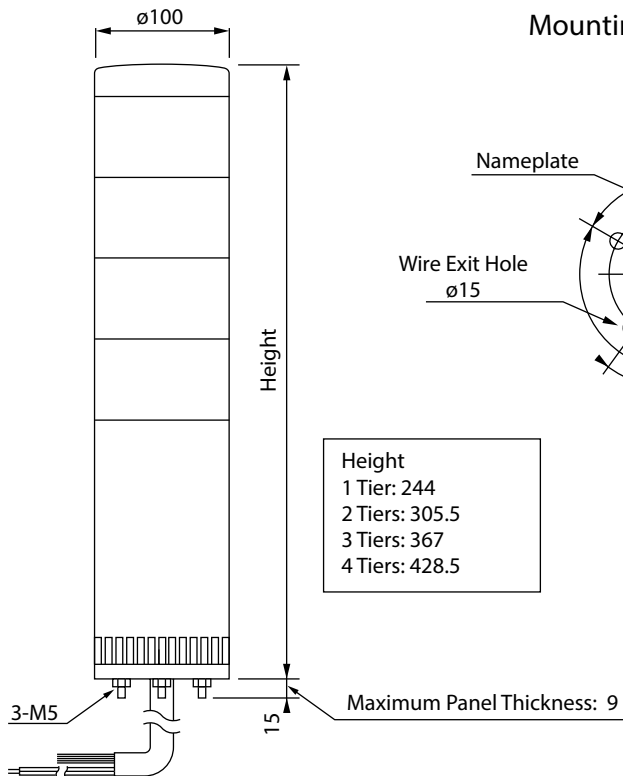
Specifications (Modules)

| Light Unit | Color | Rated Voltage | Power Consumption |
|------------|-------|---------------|-------------------|
| LGEM24-R | RED | AC/DC 24V | 2.0W |
| LGEM24-Y | AMBER | | |
| LGEM24-G | GREEN | | |
| LGEM24-B | BLUE | | |
| LGEM24-C | CLEAR | | |

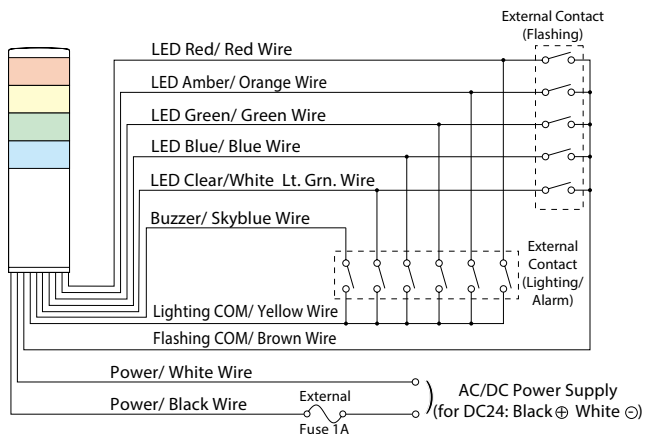
| Power Unit | Rated Voltage | Operation |
|-------------|---------------|-------------------------------|
| LGEBC-100 | AC 100V | Continuous |
| LGEBC-120 | AC 120V | |
| LGEBC-24 | AC/DC 24V | |
| LGEBC-100FB | AC 100V | Continuous/ Flashing/Alarm |
| LGEBC-120FB | AC 120V | |
| LGEBC-24FB | AC/DC 24V | |

| Part No. | Light Units per Base |
|-----------|----------------------|
| LGSHAFT-1 | 1 |
| LGSHAFT-2 | 2 |
| LGSHAFT-3 | 3 |
| LGSHAFT-3 | 3 |
| LGSHAFT-4 | 4 |

Dimensions (Unit: mm)



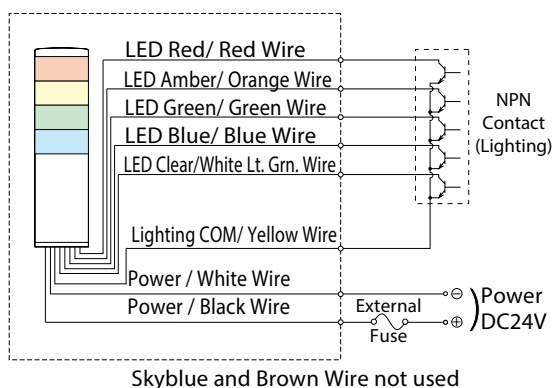
AC/DC 24V Lighting/Flashing Type



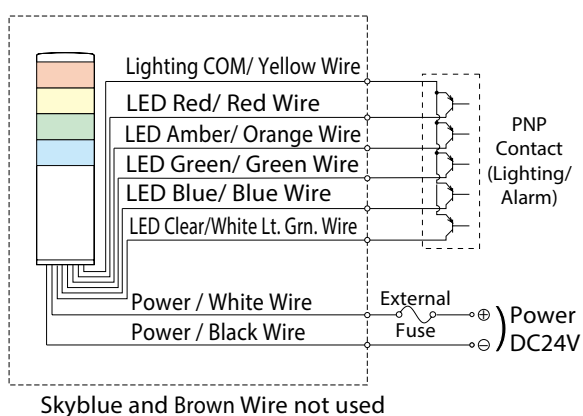
Signal Line voltage and current per LED Module

| Model | Rated Voltage | Signal Line Voltage | LED | | |
|-------|---------------|---------------------|---------------------|---------------------------|----------------|
| | | | Signal Line Current | Alarm Signal Line Current | Inrush Current |
| LGE-A | AC/DC 24V | AC/DC 24V | 90mA | 20mA | 250mA |
| LGE-A | AC 100 | DC 24V | | | |
| LGE-A | AC 220V | | | | |

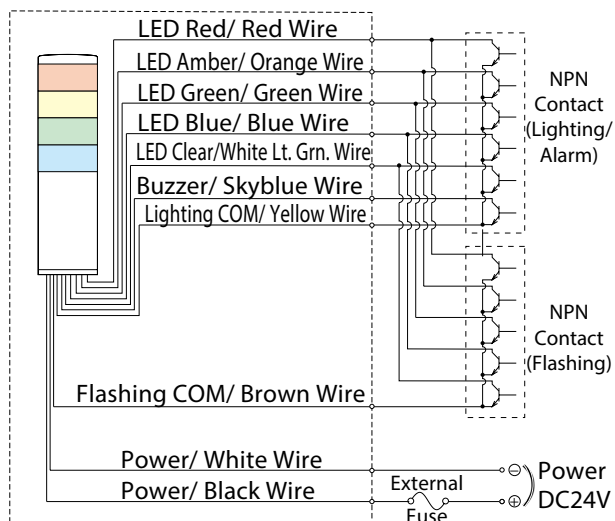
DC 24V NPN Type



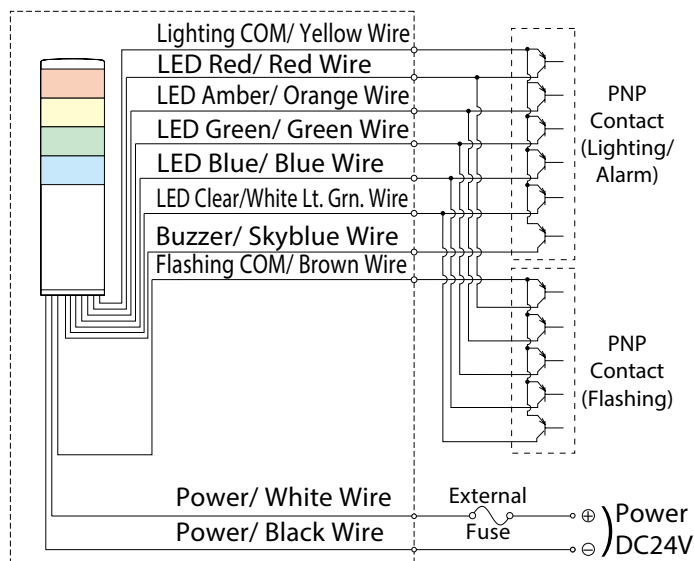
DC 24V PNP Type



DC 24V NPN FB Type



DC 24V PNP FB Type



WE/WEP

Signal Tower



LED



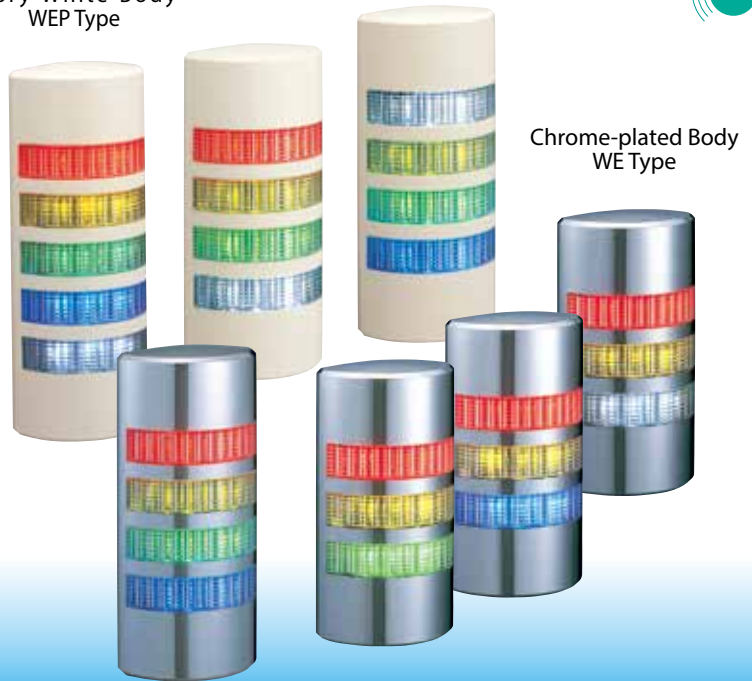
2 Alarm Sounds (FB Type)

90dB at 1m (FB Type)

IP65 (FB Type: IP54)

NPN/PNP
Open-collector

Ivory White Body
WEP Type



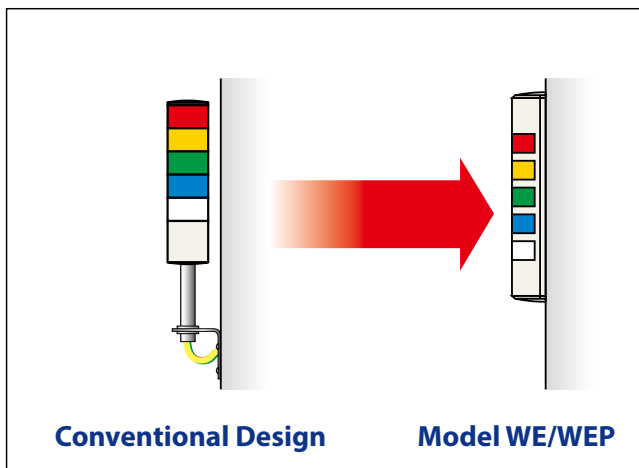
Chrome-plated Body
WE Type

Ultra slim half-moon shaped Signal Tower offers seamless integration with most equipment.

FEATURES

- Clear vertical-cut lens for enhanced illumination over a wide perspective.
- Has an optional built-in audible alarm (FB type) with an output of 90dB (at 1m).
- Installation can be vertical or horizontal.
- Two body color selections of chrome plated or ivory white.
- Lens made of superior impact and heat resistant polycarbonate resin for superior durability and enhanced illumination.
- Both NPN and PNP Compatible for direct connection to a PLC (24V DC ONLY)
- Two lighting patterns of flashing and continuous lighting.
- Dust and water resistance rating of IP65 (except for FB type: IP54).
- Available colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive.
- Is a UL Recognized Component (File No. E215660).

37.5mm Super-thin Design!

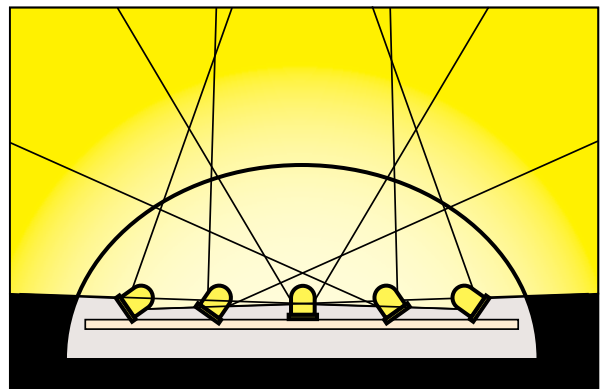


Conventional Design

Model WE/WEP

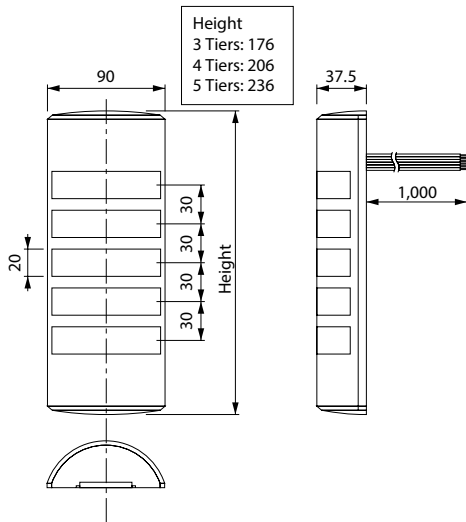
Patlite has perfected a 37.5mm-thin design that significantly enhances integration with the equipment as a built-in signal system.

Exclusively New LED Lighting Design

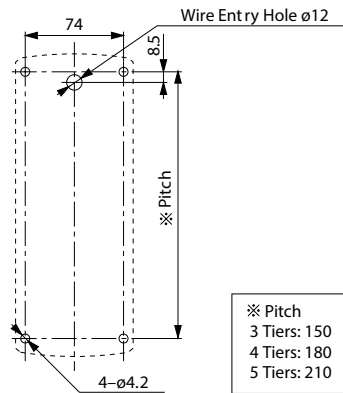


Patlite has created a revolutionary patented lighting design in which multiple LEDs project light across a broad peripheral area, ensuring equal intensity at the sides as well as the front. This design, with its side-projection technology, is a unique achievement in signal light design.

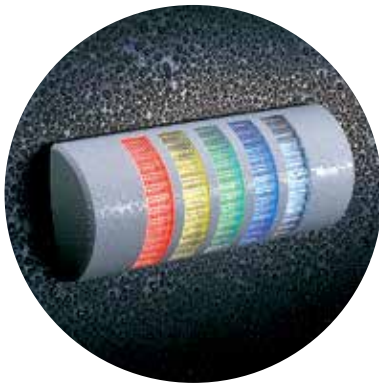
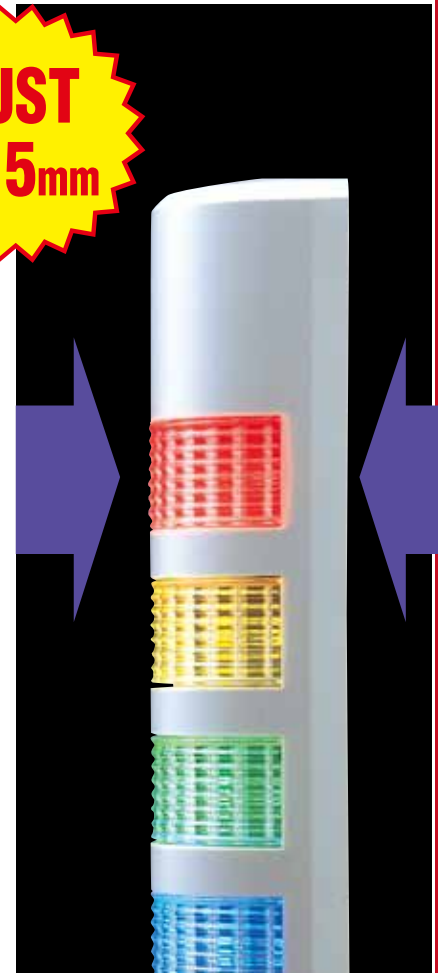
Dimensions (Unit: mm)



Mounting Dimensions

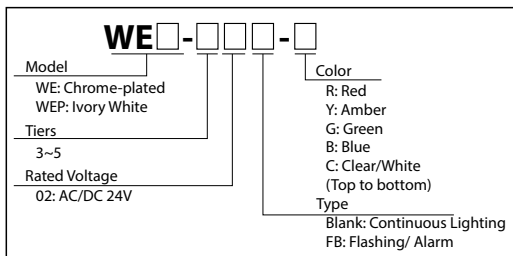


JUST 37.5mm



IP65 construction is safe for installation in damp locations and dusty factory environments.

How to Order



Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass |
|--------------|-------------|---------------|-------------------|------|
| 3 Tiers | WE(P)-302 | AC/DC 24V | 1.7W | 260g |
| | WE(P)-302FB | | 2.7W | 300g |
| 4 Tiers | WE(P)-402 | | 2.0W | 310g |
| | WE(P)-402FB | | 3.2W | 350g |
| 5 Tiers | WE(P)-502 | | 2.7W | 310g |
| | WE(P)-502FB | | 3.7W | 350g |

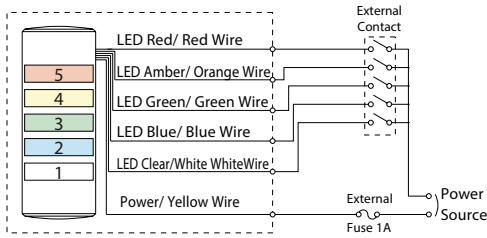
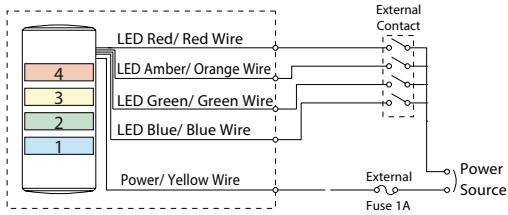
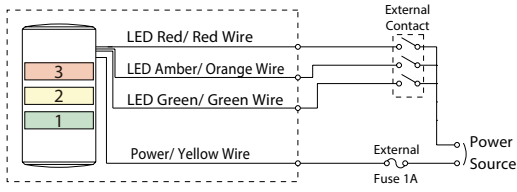
| Alarm Sounds | Lead Wire Color |
|--------------|-----------------|
| Buzzer 1 | Purple |
| Buzzer 2 | Skyblue |

Signal Line voltage and current per LED Module

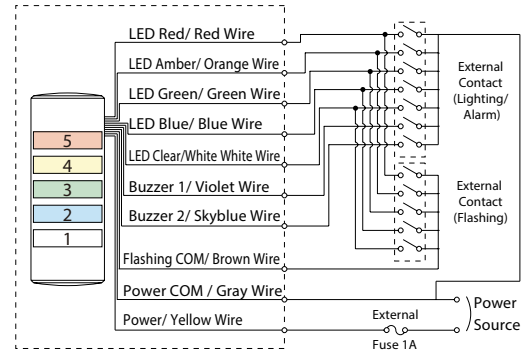
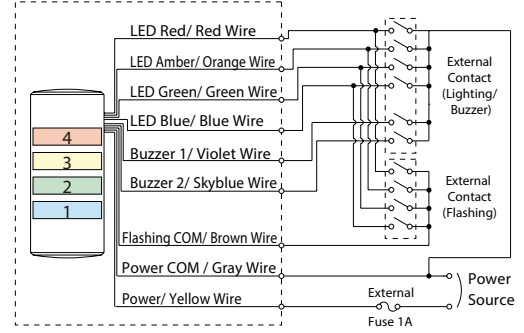
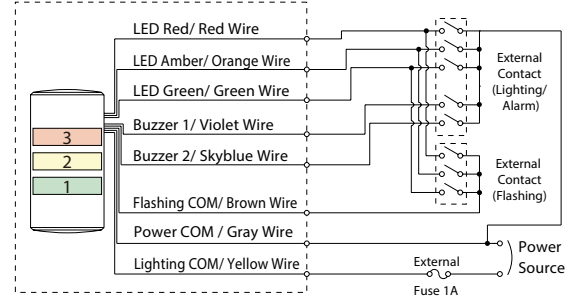
| Model | Rated Voltage | Signal Line Voltage | LED | | Alarm | |
|--------|---------------|---------------------|---------------------|---------|---------------------|----------------|
| | | | Signal Line Current | | Signal Line Current | Inrush Current |
| | | | R, Y | G, B, C | | |
| WE/WEP | AC/DC 24V | AC/DC 24V | 30mA | 25mA | 40mA | 250mA |

Wiring

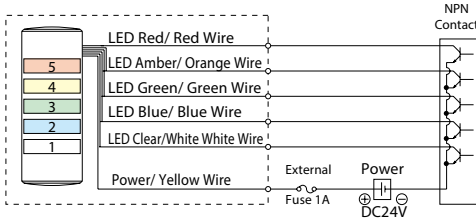
AC/DC 24V Lighting Type



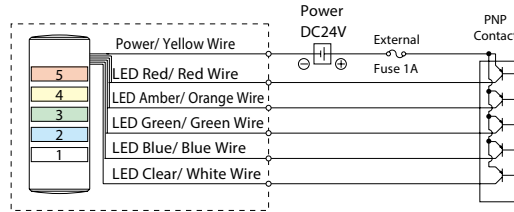
AC/DC 24V Lighting/Flashing Type



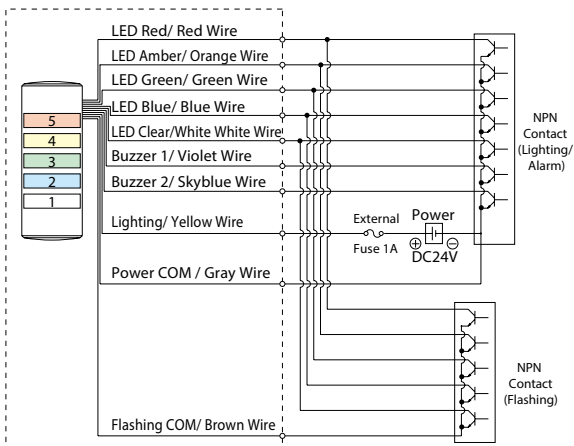
DC 24V NPN Type



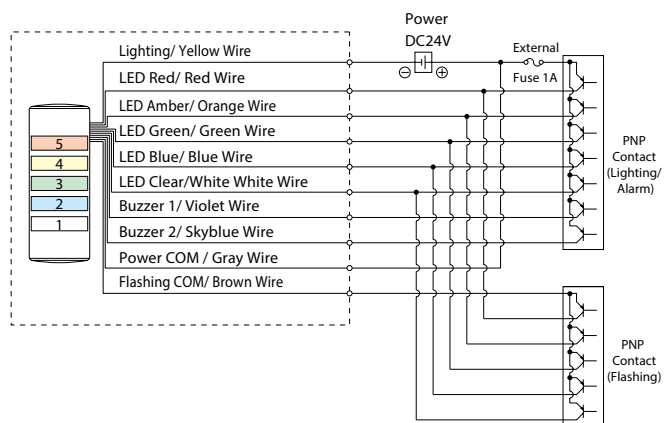
DC 24V PNP Type



DC 24V NPN FB Type



DC 24V PNP FB Type





WME-A

WME-A

Signal Tower



- LED
- 2 Alarm Sounds (FB Type)
- 90dB at 1m
- IP65 (FB Type:IP54)
- W70 D80
- NPN/PNP Open-collector

Exclusive wall-mount design saves space and enhances its integral appearance.

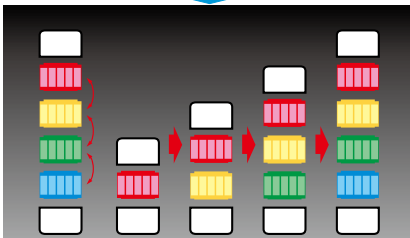
Interchangeable LED Modules

FEATURES

- Built-in audible alarm (FB type)
- Volume output of up to 90dB (at 1m).
- Easy vertical or horizontal installation when used with mounting brackets.
- Interchangeable Modules need no re-wiring, even after installation.
- Install as an option with a compatible household switch box (JISC 8336 with 82.5m pitch).
- Main body is made of ABS resin.
- Lens is made with superior impact and heat resistant polycarbonate resin for superior durability and illumination.
- Compatible for use with NPN or PNP controlled inputs (24V DC type ONLY).
- Available Colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive.
- Is a UL Recognized Component (File No. E215660).

AVAILABLE BY SPECIAL ORDER

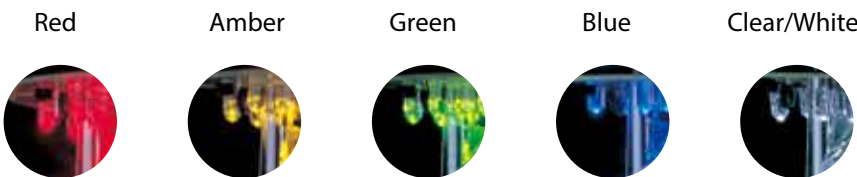
- 1 Tier Type
- Individual module control for single color



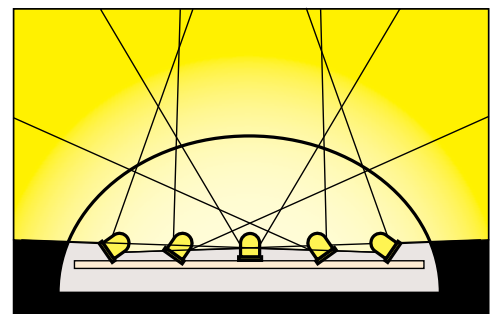
LED Tiers are changeable, even after installation.

Note: Shafts that match the number of tiers also has to be purchased.

5 "Super Bright" LED Colors to choose from!

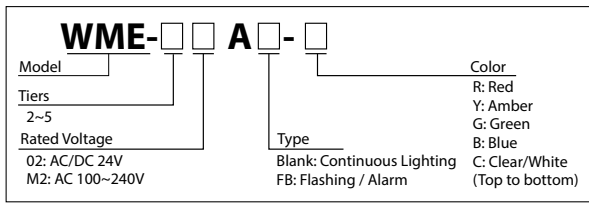


Exclusively New LED Lighting Design



Patlite has created a revolutionary patented lighting design in which multiple LEDs project light across a broad peripheral area, ensuring equal intensity at the sides as well as the front. This design, with its side-projection light technology, is a unique achievement in signal light design.

How to Order



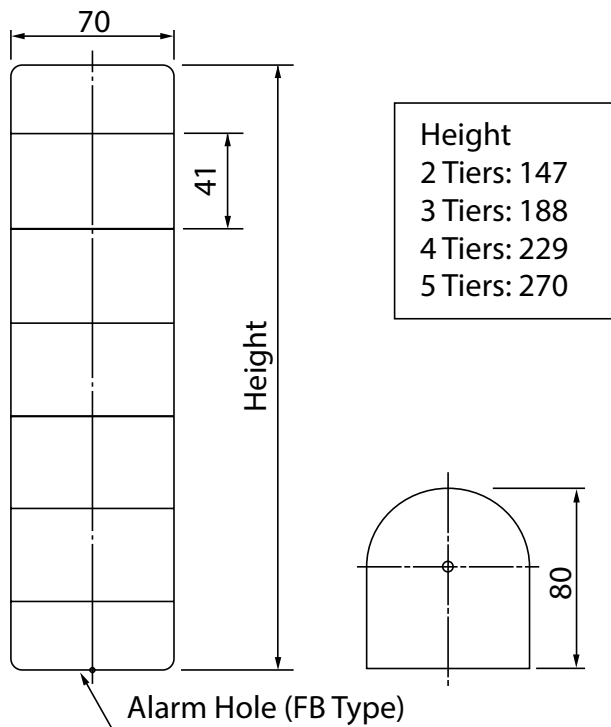
Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Mass |
|--------------|----------|---------------|-------------------|-------|
| 2 Tiers | WME-202A | AC/DC 24V | 2.7W | 390g |
| | WME-2M2A | AC 100 - 240V | 4.6W | 460g |
| 3 Tiers | WME-302A | AC/DC 24V | 3.3W | 470g |
| | WME-3M2A | AC 100 - 240V | 6.0W | 540kg |
| 4 Tiers | WME-402A | AC/DC 24V | 4.4W | 550g |
| | WME-4M2A | AC 100 - 240V | 8.0W | 620g |
| 5 Tiers | WME-502A | AC/DC 24V | 5.5W | 630g |
| | WME-5M2A | AC 100 - 240V | 10.0W | 700g |

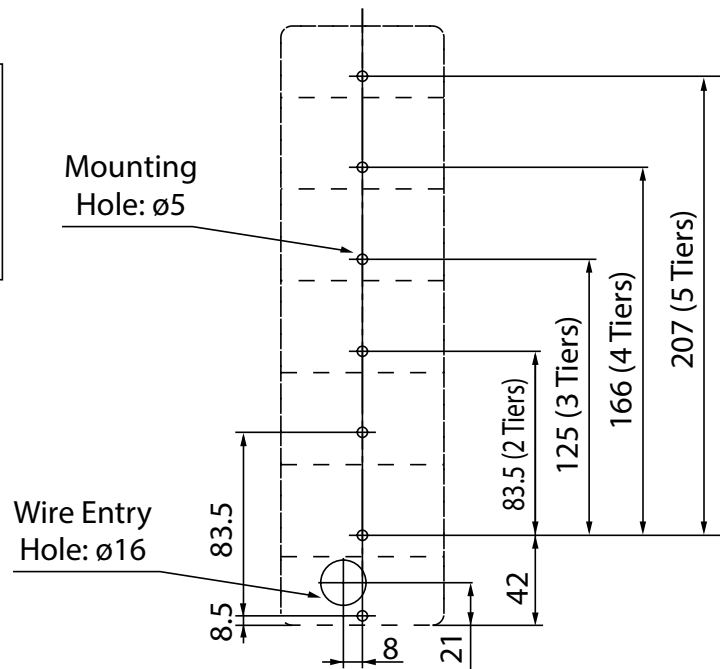
Signal Line voltage and current per LED Module

| Model | Rated Voltage | Signal Line Voltage | LED | | Alarm | |
|-------|----------------|---------------------|---------------------|---------|---------------------|----------------|
| | | | Signal Line Current | | Signal Line Current | Inrush Current |
| | | | R, Y | G, B, C | | |
| WME-A | AC/DC 24V | AC/DC 24V | 35mA | 50mA | 40mA | 250mA |
| | AC 100V - 240V | DC 24V | | | | |

Dimensions (Unit: mm)

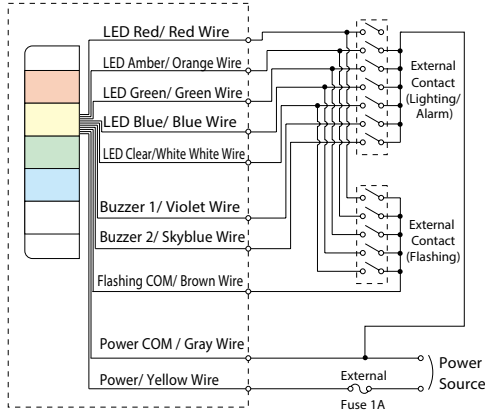


Mounting Dimensions

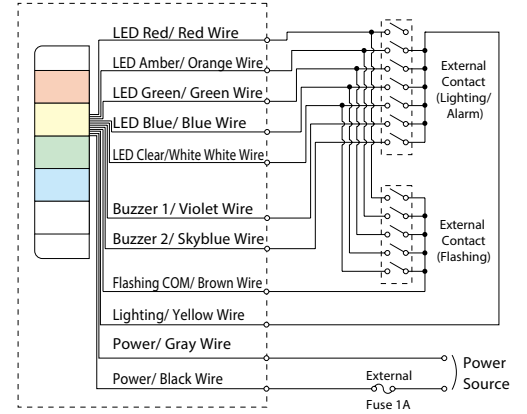


- The LED Colors are stackable, even after installation. However, the applicable Center Shaft and backplate needs to be purchased.
- Install with the alarm in the downward direction in order to preserve the IP54 rating.

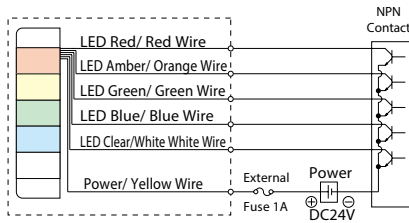
AC/DC 24V Lighting/Flashing Type



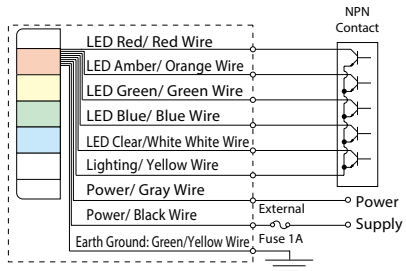
AC Power Lighting/Flashing Type



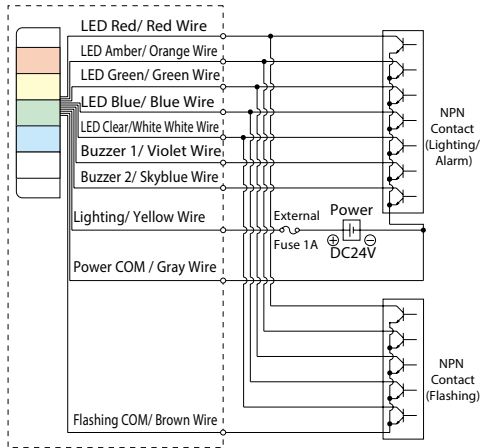
DC 24V NPN Type



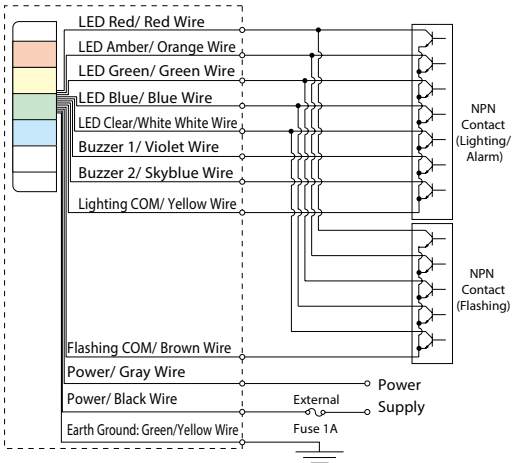
AC Power NPN Type



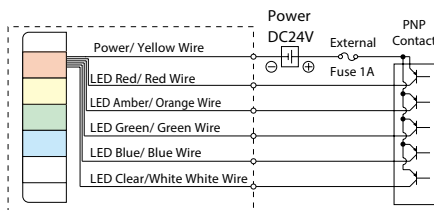
DC 24V NPN FB Type



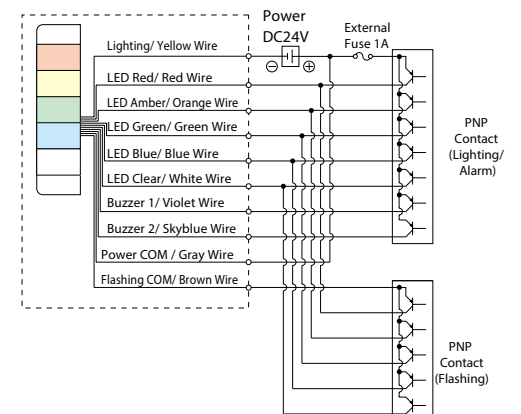
AC Power NPN FB Type



DC 24V PNP Type



DC 24V PNP FB Type



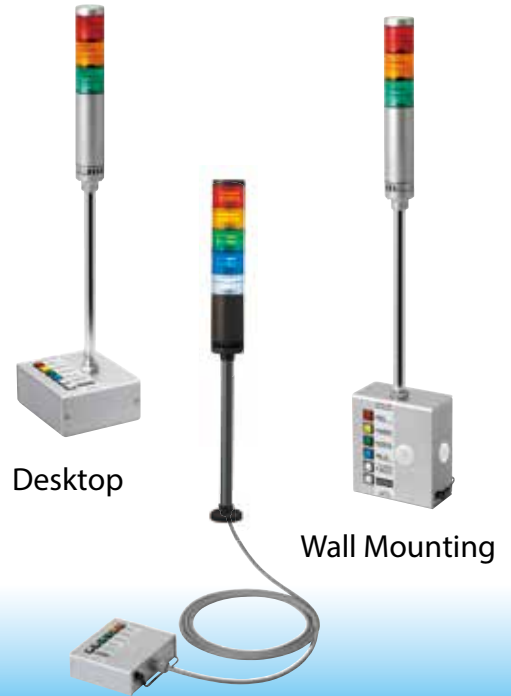
WSST

Manual Control Box

Terminal 



WSST Manual Control Box



Desktop

Wall Mounting

Signal Towers, Cables and poles sold separately

PATLITE's WSST Control Box offers excellent all-in-one functionality to meet the growing needs of the manufacturing sector and beyond.

APPLICATIONS

- Workstations and work cells
- Real-time line status indication for managers and line supervisors
- Lean manufacturing, safety and security applications
- Manual assembly operations
- Retail check-out stations
- Call centers

FEATURES

- Universal manual control box for PATLITE LED Signal Towers.
- Sturdy metal construction with 6 color-coordinated push buttons.
- Recommended Signal Towers to choose from are ME; MES; LCE; LE; LES; LME-L; and SZ-60L & SZ-50L Pole Kits
- Install up to 5 Tiers (Red, Amber, Green, Blue and Clear/White).
- Add optional sound alarm or flash functionality (must purchase FB type Signal Towers).
- Various mounting methods include Wall or Desktop installations or as Remote. Recommended Signal Towers for Remote applications (10 ft. cable included) are the LCE-U (with "L" bracket) or LME-U (with flange-mount bracket) Signal Towers.
- Power Supply is included (WSST-KIT).

How to Order

WSST-KIT

Package Description

- KIT: Complete Kit includes
- Control Box
 - Cable Gland
 - 16mm Plug (1pc)
 - 22mm Plug (2 pcs)
 - Instruction Manual
 - Power Supply

CB: Complete Kit (excluding Power Supply)

PS: Power Supply Only

Specifications

| Rated Voltage | Operating Voltage | Operating Temperature Range | Mounting Location | Mass (±10%) |
|--------------------|-------------------|--------------------------------|-------------------|---------------------|
| DC 24V (Non-polar) | DC 21.6 -26.4V | 0°C - +40°C (RH less than 90%) | Indoor Only | 1,11kg (Switch Box) |

HSST

Manual Indicating Light



Complete HSST-312 Kit



Control Box



12 in.
Mounting Pole
& Bracket



LED

The HSST includes a 3-tiered LED Signal Tower kit as a low- cost complete turn-key solution for manual assembly factories where lean manufacturing practices are dependent upon the overall operation efficiency.

APPLICATIONS

- Assembly workstations
- Safety and security applications
- Call centers
- Retail check stands
- Hospitals
- Airports

FEATURES

- Complete kit includes a 50mm diameter red, amber, green 3-tier LED Signal Tower with 4-foot Cable, poles, three-button control box, AC power adaptor and mounting brackets that can fit onto standard cubicle partitions.
- AC power adaptor (UL Listed) rated at 120VAC with 6 ft. cable length is included to allow easy set-up in any location.
- LED light illumination offers maintenance-free operation.
- Optional Extention Cable (Part No. DT-HSST-10) available in 10 ft. segments.
- Mounting screws included with the three-button control box.
- Choice of 3 in. (80mm) or 12 in. (300mm) pole included in set.

How to Order

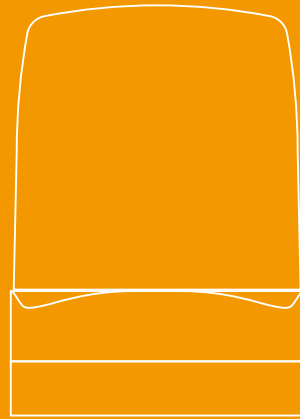
HSST-312

Package Description

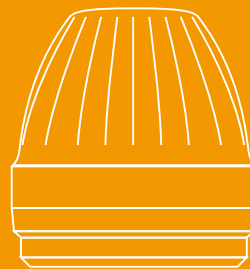
- 312: Complete Kit including
- 3 button Control Box
 - Control Box mounting screws
 - 3 tiered Signal Tower (Red, Amber, Green)
 - AC 120V Power Adaptor
 - 4 ft. cable for Signal Tower
 - 3" Pole (80mm)
 - 12" Pole (300mm)
 - Pole Mounting Brackets
 - Instruction Manual

Specifications

| Model | Rated Voltage | Tiers | Power Supply |
|----------|---------------|-----------------|----------------------------------|
| HSST-312 | DC 24V | 3 Tiers (R,Y,G) | AC120V / DC24V (Center Negative) |



Signal Lights



NE-24

LED Dome Signal Light



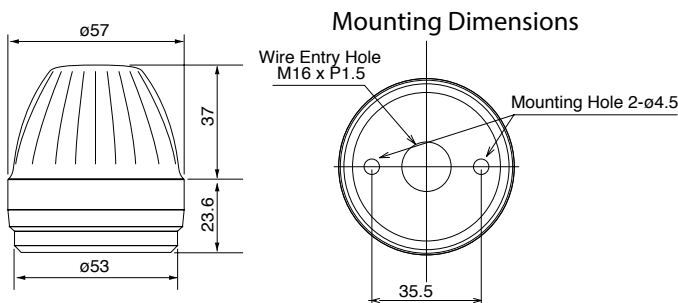
- LED
- IP65
- Ø57
- NPN/PNP
Open-collector

NE Series LED Dome Indicator Light;
The dome-shaped globe provides increased visibility while
the LEDs provide years of maintenance-free operation.

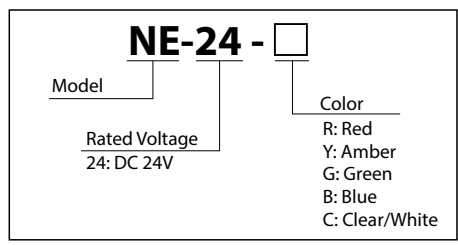
FEATURES

- Enhanced Illumination with the use of long-life, super bright LEDs.
- Low power consumption increases energy efficiency.
- High vibration-resistance and unnecessary bulb replacement makes it maintenance-free.
- Uses a terminal block for easy wiring.
- Applications are suitable for small tooling machines, control panels, etc.
- Available colors are in Red, Amber, Green, Blue, and Clear/White.
- Has the CE mark and conforms to the requirements for the EC directive.

Dimensions (Unit: mm)



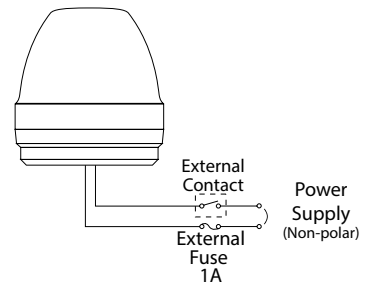
How to Order



Specifications

| Model | Color | Rated Voltage | Power Consumption | Operating Temperature Range | Mass |
|---------|-------------|---------------|-------------------|-----------------------------|------|
| NE-24-R | RED | DC 24V | 0.63W | -30 C - +50 C | 55g |
| NE-24-Y | AMBER | | | | |
| NE-24-G | GREEN | | | | |
| NE-24-B | BLUE | | | | |
| NE-24-C | CLEAR/WHITE | | | | |

Wiring



KHE

LED Multi-signal Light



Optional Rubber Gasket SZ-200A



LED Off with Clear Globe

- LED
- IP55 with SZ-200A
- Ø100
- NPN/PNP Open-collector

KHE features three flashing patterns for diverse applications.

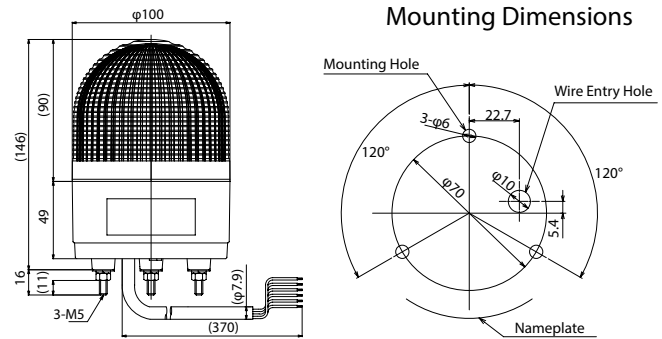
FEATURES

- Super-bright long life LED's used for three signaling patterns that simulate rotation, strobe, and blinking.
- Enhanced illumination with the use of long-life, super bright LEDs.
- No motor or bulb replacement makes it Maintenance-free.
- Low power consumption increases energy efficiency.
- Indoor installation can be upright, inverted or sideways; Outdoors is for upright only.
- Available colors are in Red, Amber, Green, and Blue.
- Has the CE mark and conforms to the requirements for the EC directive.
- Is UL Listed (File No. E215660).

AVAILABLE BY SPECIAL ORDER

- Body Color: Silver

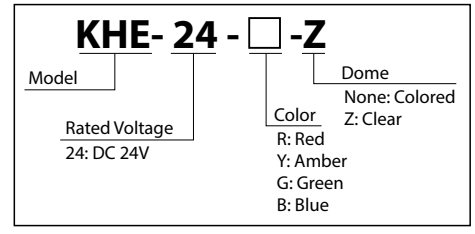
Dimensions (Unit: mm)



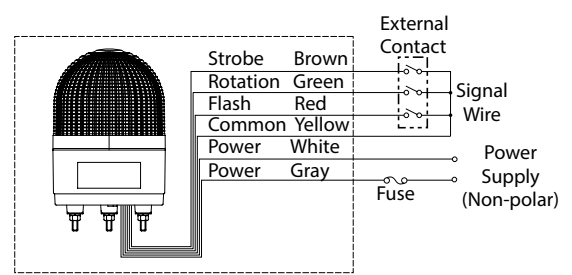
Specifications

| Model | Color | Rated Voltage | Power Consumption | Flash Patterns | | | Mass |
|--------|-------|---------------|-------------------|----------------|--------------|----------------------------|------|
| | | | | Flash | Rotation | Strobe | |
| KHE-24 | RED | DC 24V | 8.2W | 55 ±10% fpm | 175 ±10% fpm | 75 ±10% fpm (double-flash) | 450g |
| | AMBER | | | | | | |
| | GREEN | | | | | | |
| | BLUE | | | | | | |
| | | | 10.1W | | | | |
| | | | 21.6W | | | | |

How to Order



Wiring





PEW-A/PES-A

Multi-speed Flashing Signal Light



Optional Rubber Gasket SZ-210

- LED**
- 1 Alarm Sound** (PEW-B)
- 85dB at 1m** (PEW-B)
- IP55***
- Ø82**
- NPN Open-collector**

* PEW-A: IP54 (IP23 with side-wire exit mounting)
 * PES-A: IP55 with the optional rubber gasket SZ-210 (IP23 without SZ-210).

Dome shape LED Signal Light featuring enhanced visibility and maintenance-free operation.

FEATURES

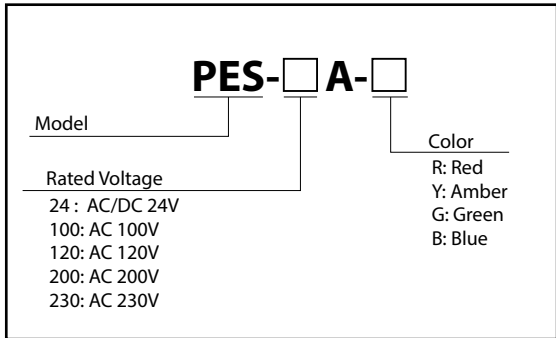
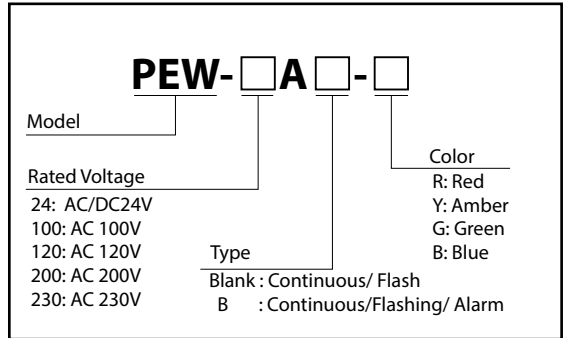
- Has maintenance-free LED's that consume nearly half the power incandescent bulb models (AC100V/200V) do.
- Newly-developed triple-reflection system for enhanced visibility and low power consumption.
- PEW-B type has a built-in adjustable audible alarm with a volume of up to 85dB (at 1m).
- Indoor installation can be upright, inverted or sideways; Outdoors is for upright only.
- The PES is rated for IP55 with the optional rubber gasket SZ-210 (IP23 without SZ-210).
- Has the CE mark and conforms to the requirements for the EC directive. (for 24V type)
- Is a UL Recognized Component (File No. E215660, for 24V, 120V, 230V types only).
- Dome is made of superior weather resistant and light translucent acrylic resin.
- Three flashing patterns of 60/120/180 fpm, switch selectable.
- The PEW is rated for IP54 (IP23 with side-wire exit mounting)
- Available colors are in Red, Amber, Green, and Blue.

AVAILABLE BY SPECIAL ORDER

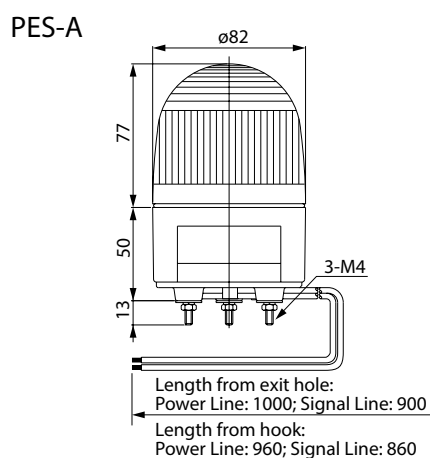
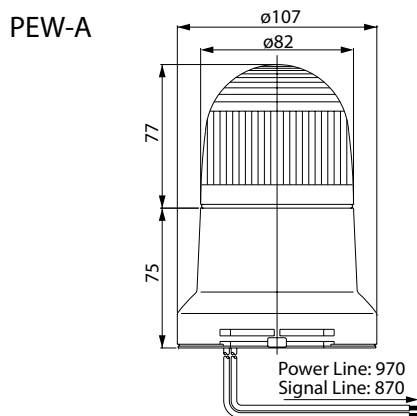
- Body Color: Silver
- IP65: PEW type only



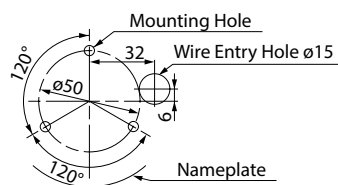
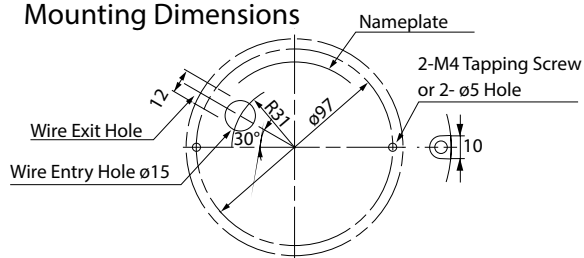
How to Order



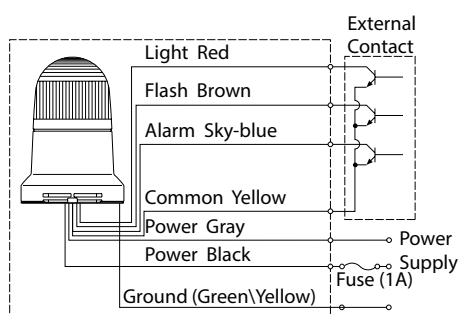
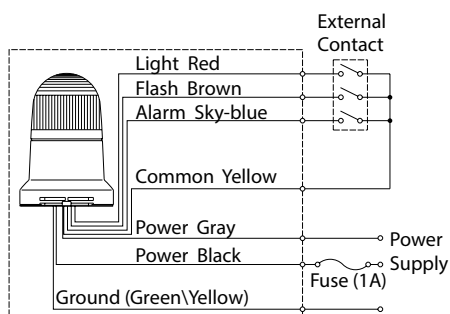
Dimensions (Unit: mm)



Mounting Dimensions



Wiring



- * All Models have the same wiring
- * Sky-blue signal wire is for buzzer type only
- * Ground wire is added for high-voltage types only

Specifications

| Model | Color | Rated Voltage | Power Consumption | Inrush Current | Mass |
|-----------|-------|---------------|-------------------|----------------|------|
| PEW-24A | R/Y | AC/DC 24V | 1.2W | 2.5A | 320g |
| | G/B | | 1.5W | | |
| PEW-24AB | R/Y | AC/DC 24V | 2.2W | 2.5A | 340g |
| | G/B | | 2.5W | | |
| PEW-100A | R/Y | AC 100V | 2.8W | 1.0A | 520g |
| | G/B | | 3.3W | | |
| PEW-100AB | R/Y | AC 100V | 5.3W | 1.0A | 540g |
| | G/B | | 5.8W | | |
| PEW-120A | R/Y | AC 120V | 3.0W | 1.0A | 520g |
| | G/B | | 3.5W | | |
| PEW-120AB | R/Y | AC 120V | 5.7W | 1.0A | 540g |
| | G/B | | 6.2W | | |
| PEW-200A | R/Y | AC 200V | 2.5W | 0.5A | 520g |
| | G/B | | 3.2W | | |
| PEW-200AB | R/Y | AC 200V | 4.9W | 0.5A | 540g |
| | G/B | | 5.6W | | |
| PEW-230A | R/Y | AC 230V | 3.1W | 0.5A | 520g |
| | G/B | | 3.8W | | |
| PEW-230AB | R/Y | AC 230V | 5.9W | 0.5A | 540g |
| | G/B | | 6.4W | | |

| Model | Color | Rated Voltage | Power Consumption | Inrush Current | Mass |
|----------|-------|---------------|-------------------|----------------|------|
| PES-24A | R/Y | AC/DC 24V | 1.2W | 2.5A | 240g |
| | G/B | | 1.5W | | |
| PES-100A | R/Y | AC 100V | 4.2W | 1.0A | 430g |
| | G/B | | 4.7W | | |
| PES-120A | R/Y | AC 120V | 4.4W | 1.0A | 430g |
| | G/B | | 4.9W | | |
| PES-200A | R/Y | AC 200V | 4.0W | 0.5A | 430g |
| | G/B | | 4.7W | | |
| PES-230A | R/Y | AC 230V | 4.6W | 0.5A | 430g |
| | G/B | | 5.3W | | |

KPE-A

Flashing/Rotating Light



LED



IP23

Ø162

Revolving Warning Light featuring maintenance-free LED's, Corrosion-proof plastic and adjustable flashing cycles.

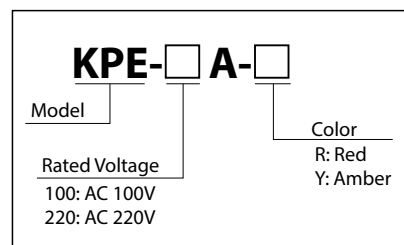
FEATURES

- Enhanced design with special high-intensity illumination to improve light diffusion and ensure sufficient brightness, even outdoors.
- Internally adjustable flashing cycle between 50 and 200 times per minute.
- Extended long-life with LEDs so no bulb replacement is needed, perfect for "hard-to-service" locations.
- Indoor installation can be upright, inverted or sideways; Outdoors is for upright only.
- With an electronic rotating light system, no worn-out motors to replace.
- Main body is made of special weather-resistant resin.
- Dome is made from superior weather-resistant and light translucent acrylic resin.
- Stainless mounting bolts with corrosion-proof screws.
- Available Colors are Red and Amber.

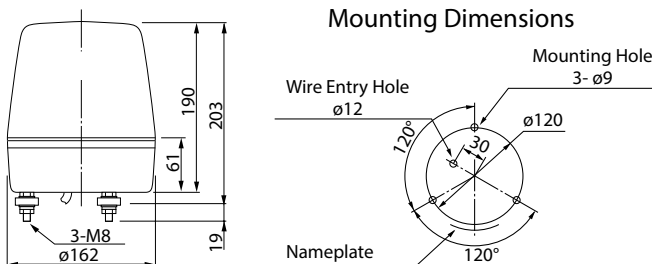
Specifications

| Model | Rated Voltage | Power Consumption | Flash Rate | Mass |
|----------|---------------|--------------------------------|------------------------|-------|
| KPE-100A | AC 100V | Continuous: 4W Flashing: 9W | 50 - 200 rpm 60 fpm | 1.5kg |
| KPE-220A | AC 220V | | | |

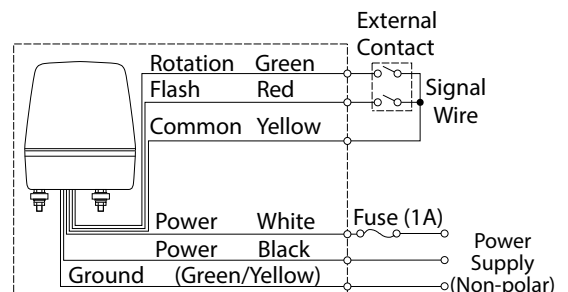
How to Order



Dimensions (Unit: mm)



Wiring



PSE

LED Signal Light



LED

IP55 with SZ-210

Ø82



Optional Rubber Gasket SZ-210

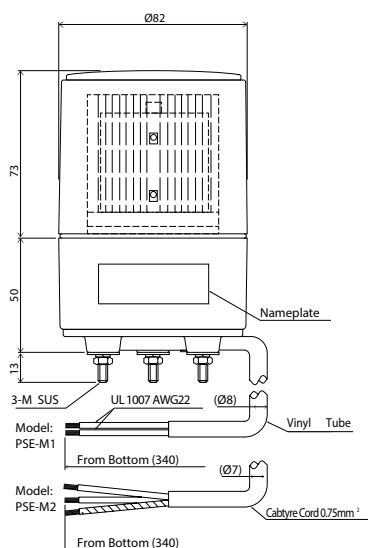


New LED flashing beacon! Can outlast a conventional Xenon lamp and is available in four LED Colors.

FEATURES

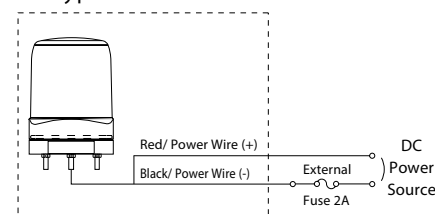
- Has maintenance-free LED's that consume nearly half the power incandescent bulb models do.
- The PSE is rated for IP55 with the optional rubber gasket SZ-210 (IP23 without SZ-210).
- Has the CE mark and conforms to the requirements for the EC directive.
- Three flashing patterns of 110 fpm (±10%).

Dimensions (Unit: mm)

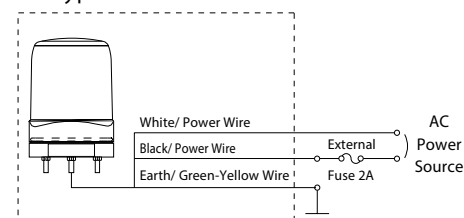


Wiring

M1 Type



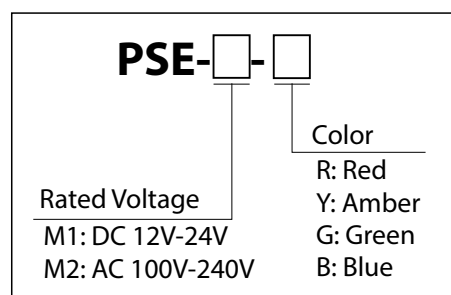
M2 Type



Specifications

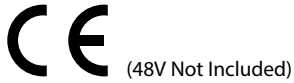
| Model | PSE-M1 | PSE-M2 |
|---------------------------------------|---------------------------|--------------|
| Rated Voltage | DC 12V - 24V | AC 100V-240V |
| Power Consumption | 3.0W | 3.2W |
| Maximum Operating Ambient Temperature | 60°C | |
| Protection Rating | IP23 | |
| Mounting Location | Indoor or Outdoor Use | |
| Flash Rate | 110 ±10rpm (Triple-flash) | |
| Mass | 0.30kg | 0.35kg |

How to Order



LFH

LED Signal Light



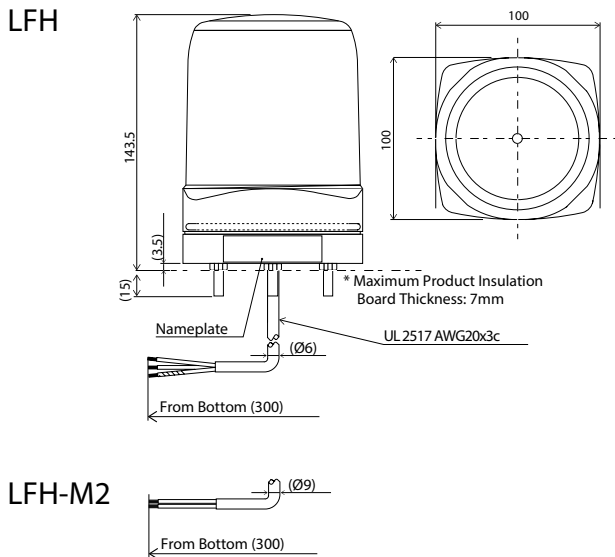
LED

IP66

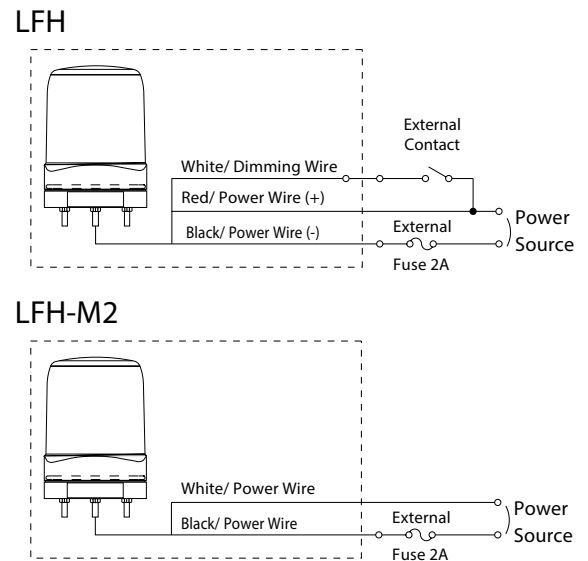
Ø100

New LED flashing beacon! Available in five outdoor visible LED Colors and has UL certification.

Dimensions (Unit: mm)



Wiring

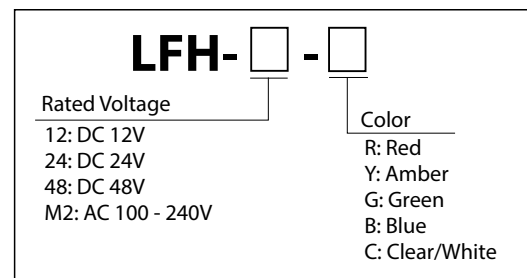


Specifications

| Model | LFH-12 | LFH-24 | LFH-48 | LFH-M2 |
|-------------------------------------|---------------------------------|--------|----------------|---------------|
| Rated Voltage | DC 12V | DC 24V | DC 48V | AC 100 - 240V |
| Current Consumption (max) | 0.50A | 0.23A | 0.18A | 0.12A |
| Operating Ambient Temperature Range | -30°C to +70°C | | -20°C to +60°C | |
| Protection Rating | IP66 | | | |
| Mounting Location | Indoor or Outdoor Use | | | |
| Flash Rate | 110 ±10fpm (Triple-flash) | | | |
| Certifications | UL, CE ¹ , RoHS, FCC | | | |
| Mass | 0.57kg | | 0.61kg | |

*1 LFH-48 not CE certified.

How to Order



LFK-S

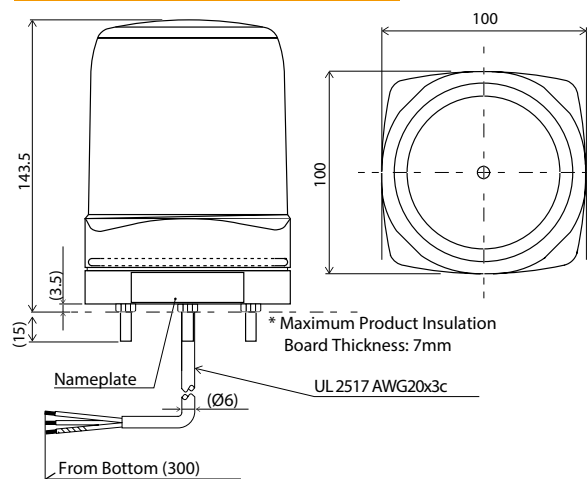
LED Signal Light



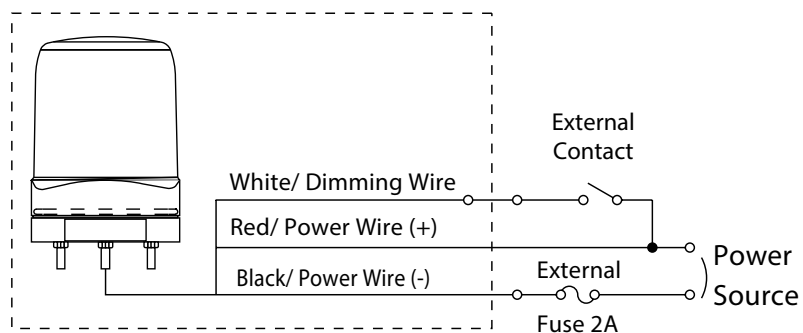
- LED
- IP55
- Ø100

New LED flashing beacon! So bright, it has a dimming input.

Dimensions (Unit: mm)



Wiring

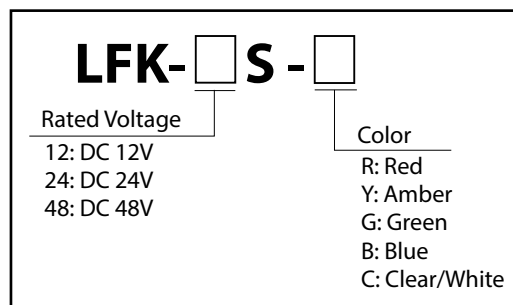


Specifications

| Model | LFK-12S | LFK-24S | LFK-48S |
|-------------------------------------|-----------------------------|---------|---------|
| Rated Voltage | DC 12V | DC 24V | DC 48V |
| Current Consumption (max) | 0.49A | 0.23A | 0.17A |
| Operating Ambient Temperature Range | -20°C to +60°C | | |
| Protection Rating | IP55 | | |
| Mounting Location | Indoor or Outdoor Use | | |
| Flash Rate | 140 ±14fpm (Triple-flash) | | |
| Certifications | CE [†] , RoHS, ECE | | |
| Mass | 0.5kg | | |

*1 LFK-48 not CE certified.

How to Order



XPE

LED Signal Light



LED



IP23

Ø162

New LED flashing beacon! Available in four LED Colors.

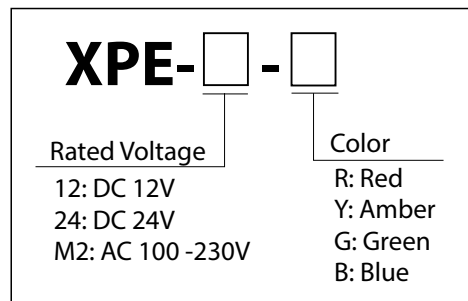
FEATURES

- Long-lasting LED's greatly reduce maintenance costs.
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Main Body is made of impact and heat-resistant ABS resin.
- Dome lens is made of superior weather-resistant and light-translucent AS resin.
- Available Colors are Red, Amber, Green, and Blue.
- CE Compliant
- RoHS Compliant (DC 12V and DC 24V Type).

Specifications

| Model | XPE-12 | XPE-24 | XPE-M2 |
|-------------------------------|-----------------------------------|-------------|-------------------|
| Rated Voltage | DC 12V | DC 24V | AC 100 - 230V |
| Voltage Range | DC 9.5-15V | DC 20 - 30V | AC 90 - 250V |
| Current Consumption | 0.50A | 0.23A | 0.12A (at 100VAC) |
| Operating Ambient Temperature | -30°C to +70°C | | -20°C to +60°C |
| Protection Rating | IP23 | | |
| Mounting Location | Indoor or Outdoor Use | | |
| Flash Rate | 110 ±10fpm (Triple-flash Pattern) | | |
| Certifications | RoHS | | |

How to Order





XME

LED Signal Light



LED

IP23

Ø187

New Large Sized LED flashing beacon! Available in three LED Colors.

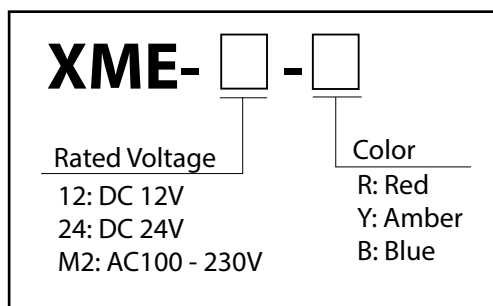
FEATURES

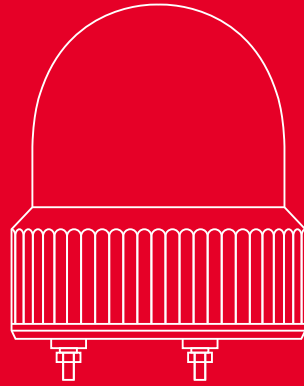
- Extended product lifespan by using LED lights.
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Main body is made of a melamine baked finish with a corrosion-proof stainless steel (SUS 304) lens mounting fixture.
- Dome lens is made of superior weather-resistant and light-translucent AS resin.
- Mounting Bolts are drip-proof and made of rust-free stainless steel.
- Available Colors are Red, Amber, and Blue.
- CE Compliant
- RoHS Compliant (DC 12V and DC 24V Type).

Specifications

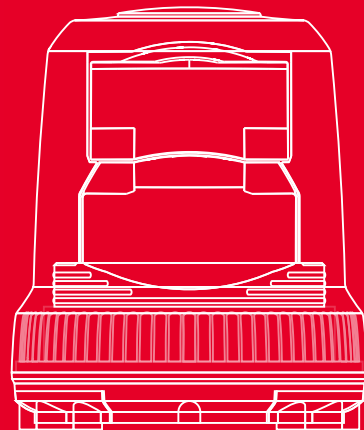
| Model | XME-12 | XME-24 | XME-M2 |
|-------------------------------|-----------------------------------|-------------|-------------------|
| Rated Voltage | DC 12V | DC 24V | AC 100 - 230V |
| Voltage Range | DC 9.5-15V | DC 20 - 28V | AC 90 - 250V |
| Current Consumption | 0.50A | 0.23A | 0.12A (at 100VAC) |
| Operating Ambient Temperature | -30°C to +70°C | | -20°C to +60°C |
| Protection Rating | IP23 | | |
| Mounting Location | Indoor or Outdoor Use | | |
| Flash Rate | 110 ±10fpm (Triple-flash Pattern) | | |
| Certifications | RoHS | | |

How to Order





Revolving Warning Lights



RLE

Revolving Warning Light



Optional Rubber Gasket SZ-210

LED

IP55 with SZ-210

Ø82

LED Signal Light featuring energy-saving and enhanced illumination with an LED integrated reflection system.

FEATURES

- Indoors allows upright, inverted, and horizontal installation; outdoors allows upright installation only.
- Dome lens is made of superior impact and heat resistant polycarbonate resin.
- Compact motor with high durability and energy-efficient characteristics.
- LED integrated reflection system for enhanced illumination.
- Energy-efficient and maintenance-free LED array
- Main body is made of impact and heat resistant ABS resin.
- Colors available are Red, Amber, and Green.

Specifications

| Model | Rated Voltage | Power Consumption | Flash Rate (fpm) | Mass |
|----------|---------------|-------------------|------------------|------|
| Ⓞ RLE-12 | DC 12V | 2.5W | 120 | 400g |
| RLE-24 | DC 24V | 3.0W | | 400g |
| RLE-100 | AC 100V | 4.0W | | 600g |
| RLE-220 | AC 220V | | | 600g |

Ⓞ Available by Special Order

How to Order

RLE- -

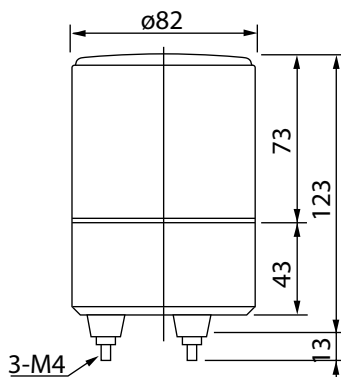
Model Color

Rated Voltage

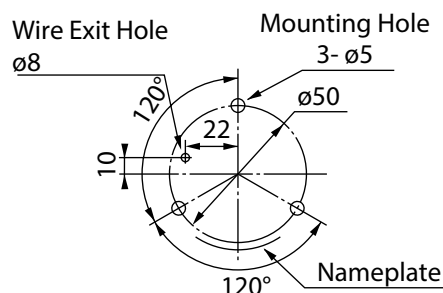
12 : DC 12V
 24 : DC 24V
 100: AC 100V
 220: AC 220V

R: Red
 Y: Amber
 G: Green
 B: Blue

Dimensions (Unit: mm)



Mounting Dimensions



RU / RUP / RS

Revolving Warning Light



Bulb

IP55 with SZ-210

Ø82



Optional Rubber Gasket SZ-210

Compact Revolving Warning Light perfectly designed for small devices.

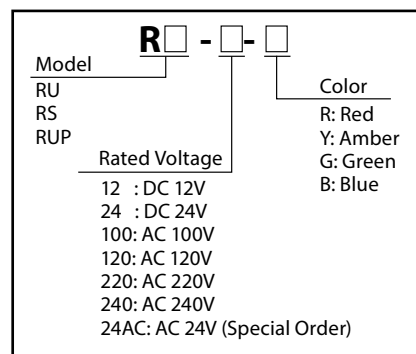
FEATURES

- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.
- Dome is made from superior impact and heat resistant polycarbonate resin.
- Main body is made of impact and heat-resistant polycarbonate resin.
- Rotating parabolic reflector to enhance visibility from a distance.
- Vibration-resistant automobile bulb for extended bulb life.
- Available Colors are Red, Amber, Green, and Blue.

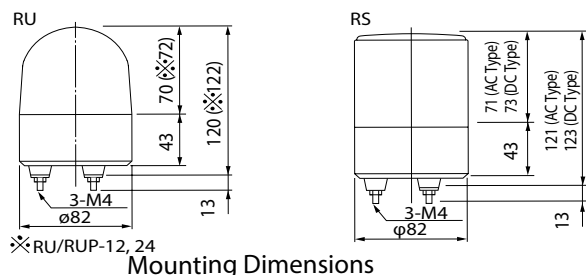
AVAILABLE BY SPECIAL ORDER

- Body Color: Silver
- Mounting Pole and Bracket: Standard with RUP Series.

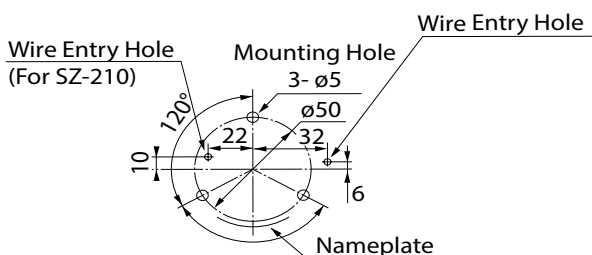
How to Order



Dimensions (Unit: mm)



Specifications



| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass | |
|---------------|---------------|---------------------|------------------|---------|-----------|-------|-------|
| | | | | Ratings | Repl. No. | RU/RS | RUP |
| RU(P)/RS-12 | DC 12V | 0.5A | 120 | 12V 6W | 18 | 0.4kg | 0.8kg |
| RU(P)/RS-24 | DC 24V | 0.3A | | 24V 6W | 19 | | |
| RU(P)/RS-100 | AC 100V | 0.1A | | 12V 6W | 18 | 0.6kg | 1.0kg |
| RU(P)/RS-120 | AC 120V | | | | | | |
| RU(P)/RS-220 | AC 220V | 0.05A | | 24V 6W | 19 | 0.4kg | 0.8kg |
| RU(P)/RS-240 | AC 240V | | | | | | |
| RU(P)/RS-24AC | AC 24V | 0.3A | | | | | |

© Available by Special Order

RKE/RKEB/RHE/RHEB



Super-bright LED Revolving Warning Light



- LED**
- IP55** with SZ-200A
- 1 Alarm Sound** (RHEB & RKEB)
- 90dB at 1m** (RHEB & RKEB)
- Ø100**



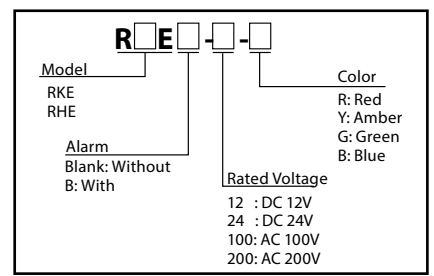
Optional Rubber Gasket SZ-200A

Compact LED revolving warning light featuring one super-bright LED chip and an enhanced high dispersion reflection system.

FEATURES

- RHEB/RKEB includes an internal alarm (hi-pitched tone) of 90dB (at 1m) that is synchronized with the light operation.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.
- Compact motor with high durability and energy-efficient characteristics.
- Dome lens is made of impact and heat resistant polycarbonate resin.
- Energy-efficient by using only 1 LED chip which is super-bright.
- Main body is made of impact and heat resistant ABS resin.
- Colors available are Red, Amber, Green, and Blue.
- Uses a terminal block for easy wiring.

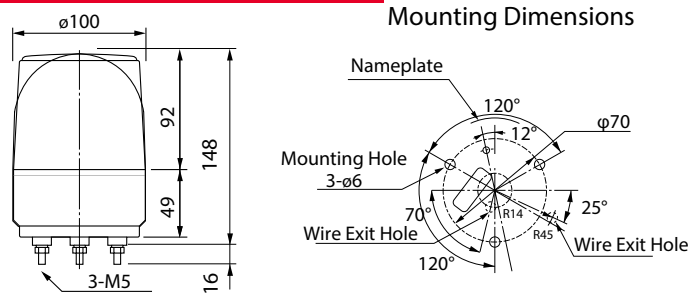
How to Order



Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate | Mass |
|--------------|---------------|---------------------|------------|------|
| RKE/RKEB-12 | DC 12V | 0.25A | 120 fpm | 400g |
| RKE/RKEB-24 | DC 24V | 0.16A | | 600g |
| RKE/RKEB-100 | AC 100V | 0.04A | | 400g |
| RKE/RKEB-200 | AC 200V | 0.02A | | 600g |
| RHE/RHEB-12 | DC 12V | 0.25A | | 400g |
| RHE/RHEB-24 | DC 24V | 0.16A | | 600g |
| RHE/RHEB-100 | AC 100V | 0.04A | | |
| RHE/RHEB-200 | AC 200V | 0.02A | | |

Dimensions (Unit: mm)



Newly developed reflector for LED revolving warning light



The PATLITE LED revolving warning light uses a unique and patented reflecting system, solely designed for these models. Even though the dispersion characteristics of the LED chip is less than an incandescent bulb, PATLITE's unique design creates an equivalent dispersion effect with the light reflector.



The uniquely designed reflectors not only reflect upward and to the side, but also downward; this cannot be achieved by incandescent bulb type revolving warning lights. The PATLITE LED revolving warning light is suitable for applications where high visibility from a low angle is required.



RH-A/ RK-A

RH-A/RKA

Revolving Warning Light



Optional Rubber Gasket SZ-200A

Bulb

IP55 with SZ-200A

1 Alarm Sound (RHB & RKB)

90dB at 1m (RHB & RKB)

Terminal

Ø100

Compact Revolving Warning Light featuring high durability and easy wiring with terminal block.

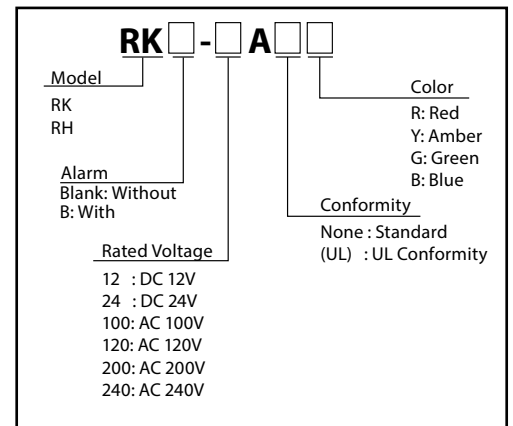
FEATURES

- Indoors allows upright, inverted, and sideways installation; Outdoors allows upright installation only.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.
- Dome is made from superior impact and heat resistant polycarbonate resin.
- Main body is made of impact and heat-resistant polycarbonate resin.
- Built-in audible alarm for models RHB/RKB at a sound of 90dB (at 1m).
- Rotating parabolic reflector to enhance visibility from a distance.
- Is UL Listed for 24V, 120V, and 240V types (File No. E215660)
- Vibration-resistant automobile bulb for extended bulb life.
- Available Colors are Red, Amber, Green, and Blue.
- Utilizes a terminal block for easy wiring.

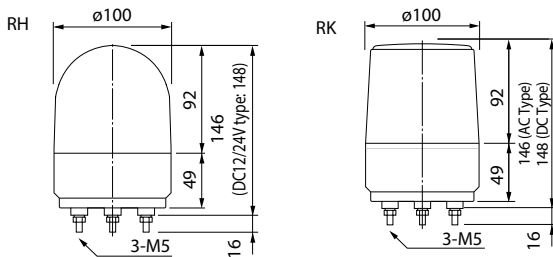
AVAILABLE BY SPECIAL ORDER (RH-A TYPE)

- Body Color: Silver

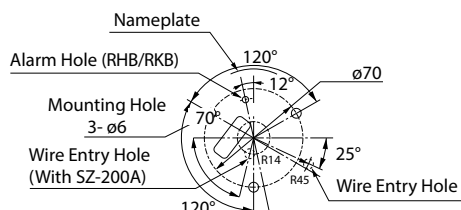
How to Order



Dimensions (Unit: mm)



Mounting Dimensions



Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|------------------|---------------|---------------------|------------------|---------|-----------|------|
| | | | | Rated | Repl. No. | |
| RH/RHB-12A | DC 12V | 0.8A | 170 | 12V 10W | 9 | 400g |
| RH/RHB-24A (UL) | DC 24V | 0.5A | | 24V 10W | 10 | |
| RH/RHB-120A (UL) | AC 120V | 0.1A | | 12V 5W | 12 | 600g |
| RH/RHB-200A | AC 200V | 0.03A | | | | |
| RH/RHB-240A (UL) | AC 240V | 0.05A | | 24V 10W | 10 | 400g |
| RK/RKB-24A (UL) | DC 24V | 0.5A | | | | |
| RK/RKB-120A (UL) | AC 120V | 0.1A | | 12V 5W | 12 | 600g |
| RK/RKB-200A | AC 200V | 0.03A | | | | |
| RK/RKB-240A (UL) | AC 240V | 0.05A | | | | |

SKH-EA

Revolving Warning Light



- Bulb**
- IP23**
- Ø100**

Best-selling Revolving Warning Light for wide range of applications.

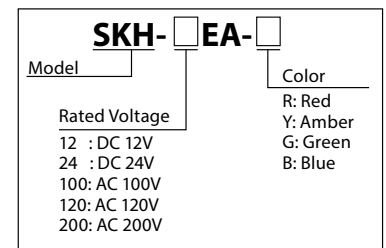
FEATURES

- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.
- Dome is made from superior weather-resistant and light-translucent acrylic resin.
- Rotating parabolic reflector to enhance visibility from a distance.
- Vibration-resistant automobile bulb for extended bulb life.
- Available Colors are Red, Amber, Green, and Blue.

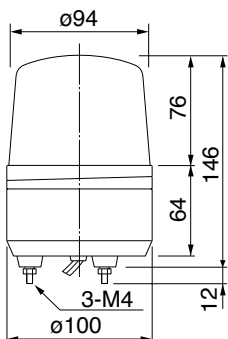
Specifications

| Series | Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|------------------|-----------|---------------|---------------------|------------------|---------|-----------|------|
| | | | | | Ratings | Repl. No. | |
| USA Version | SKH-12EA | DC 12V | 0.8A | 170 | 12V 10W | 9 | 400g |
| | SKH-24EA | DC 24V | 0.5A | | 24V 10W | 10 | 400g |
| | SKH-120EA | AC 120V | 0.07A | | 12V 5W | 12 | 600g |
| Standard Version | SKH-12EA | DC 12V | 0.8A | | 12V 10W | 9 | 400g |
| | SKH-24EA | DC 24V | 0.5A | | 24V 10W | 10 | 400g |
| | SKH-100EA | AC 120V | 0.065A | | 12V 5W | 12 | 600g |
| | SKH-200EA | AC 200V | 0.03A | | | | |

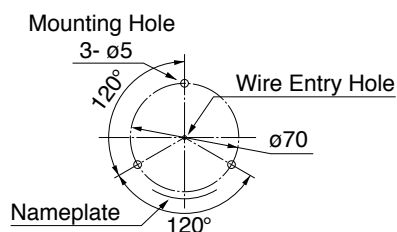
How to Order



Dimensions (Unit: mm)



Mounting Dimensions





WH-A / WK-A

Revolving Warning Light



WH-A/WK-A



WH-A



WK-A



Bulb

1 Alarm Sound (WHB-A Only)

90dB at 1m (WHB-A Only)

IP54 (B Type:IP23)

Ø100

Easily attachable to an electrical box with easy wiring to a terminal block.



Install in various directions when using for indoor applications.

- Sideways
- Upside-down



When installing the WHB, direct the buzzer in a downward direction.

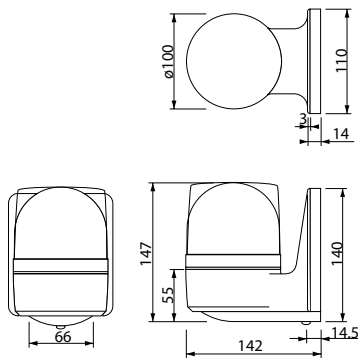
Wall-mount Revolving Warning Light featuring easy wiring with terminal block.

FEATURES

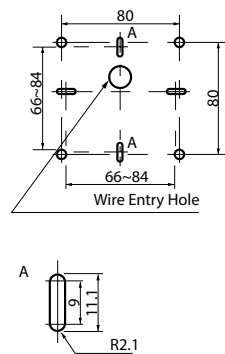
- Has the CE mark and conforms to the requirements (12V, 24V type only) for the EC directive.
- Upright, inverted, and sideways installation allowed for indoors as well as outdoors*.
- Dome is made from superior weather-resistant and light-translucent acrylic resin.
- Rotating parabolic reflector to enhance visibility from a distance.
- Compact motor with high durability and energy-efficient characteristics.
- Vibration-resistant automobile bulb for extended bulb life.
- Main body is made of impact and heat resistant ABS resin.
- Available Colors are Red, Amber, Green, and Blue.
- Uses a terminal block for easy wiring.

*WHB installation is upright only for outdoor use.

Dimensions (Unit: mm)



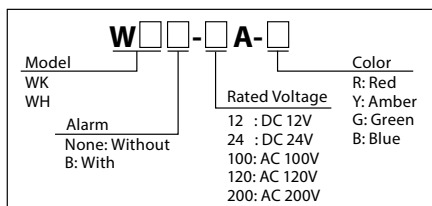
Mounting Dimensions



Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|----------|---------------|---------------------|------------------|---------|-----------|------|
| | | | | Ratings | Repl. No. | |
| WK-12A | DC 12V | 0.8A | 170 | 12V 10W | 9 | 550g |
| WH-24A | DC 24V | 0.5A | | 24V 10W | 10 | |
| WK-24A | | | | 12V 5W | 12 | 750g |
| WH-100A | AC 100V | 0.07A | | | | |
| WK-100A | | | | | | |
| WH-120A | AC 120V | 0.08A | | | | |
| WK-120A | | | | | | |
| WH-200A | AC 200V | 0.04A | | | | |
| WK-200A | | | | | | |
| WKB-12A | DC 12V | 0.85A | | 12V 10W | 9 | 550g |
| WHB-24A | DC 24V | 0.5A | | 24V 10W | 10 | |
| WKB-24A | | | | 12V 5W | 12 | 750g |
| WHB-100A | AC 100V | 0.07A | | | | |
| WKB-100A | | | | | | |
| WHB-120A | AC 120V | 0.07A | | | | |
| WKB-120A | | | | | | |
| WHB-200A | AC 200V | 0.04A | | | | |
| WKB-200A | | | | | | |

How to Order



SKH-A

Revolving Warning Light

CE (12/24V Only)

Bulb



1 Alarm Sound (SKHB)

90dB at 1m (SKHB)

IP54 (SKH-SA, others IP23)

Ø118



Corrosion-proof plastic Revolving Warning Light for a variety of applications.

FEATURES

- Rotating parabolic reflector to enhance visibility from a distance.
- Vibration-resistant automobile bulb for extended bulb life.
- Includes an internal alarm of 90dB (at 1m) that is synchronized with the light operation.
- Upright, inverted, and sideways installation allowed for indoors* as well as outdoors.
- Dome is made from superior weather-resistant and light-translucent acrylic resin.
- Available Colors are Red, Amber, Green, and Blue.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.

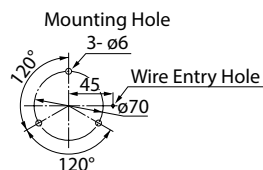
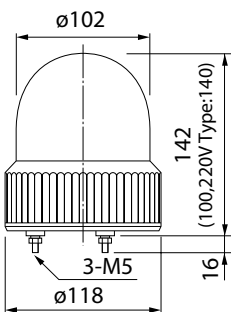
*SKH-SA installation allows upright and inverted installation only for indoor use.

Specifications

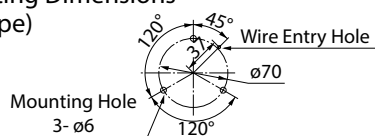
| Model | | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|--------------|---------------|---------------|---------------------|------------------|---------|-----------|-------|
| SKH-A Series | SKHB-A Series | | | | Ratings | Repl. No. | |
| SKH-101A | SKHB-12A | DC 12V | 0.8A | 170 | 12V 10W | 9 | 400g |
| SKH-102A | SKHB-24A | DC 24V | 0.5A | | 24V 10W | 10 | |
| SKH-110A | SKHB-100A | AC 100V | 0.065A | | 12V 5W | 12 | 600g |
| SKH-112A | SKHB-120A | AC 120V | 0.07A | | | | |
| SKH-120A | SKHB-200A | AC 200V | 0.03A | | 24V 10W | 10 | 400kg |
| Ships/Boat | SKH-102SA | - | DC24V | | | | |
| | SKH-110SA | - | AC 100V | 0.1A | 12V 5W | 12 | 600g |

Dimensions (Unit: mm)

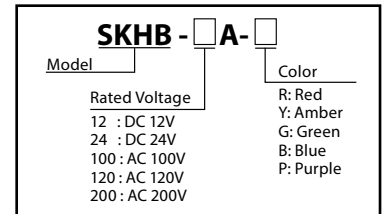
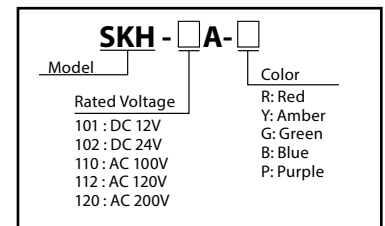
Mounting Dimensions (DC Type)



Mounting Dimensions (AC Type)



How to Order





SKHE / SKHEB

Super-bright LED Revolving Warning Light



- LED
- 90dB at 1m (SKHEB)
- IP23
- Ø118

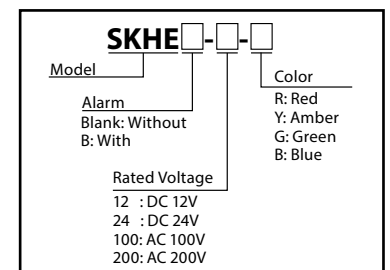
SKHE/SKHEB

Compact LED revolving warning light featuring one super-bright LED chip and an enhanced high dispersion reflection system.

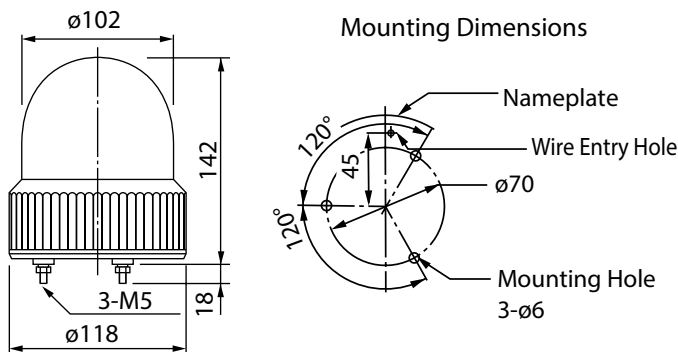
FEATURES

- SKHEB series includes an internal alarm (hi-pitched tone) of 90dB (at 1m) that is synchronized with the light operation.
- Indoors allows upright, inverted, and horizontal installation; outdoors allows upright installation only.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.
- Compact motor with high durability and energy-efficient characteristics.
- Energy-efficient by using only 1 LED chip which is super-bright.
- Dome lens is made of impact and heat resistant polycarbonate resin.
- Colors available are Red, Amber, Green, and Blue.

How to Order



Dimensions (Unit: mm)



Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Mass |
|----------------|---------------|---------------------|------------------|------|
| SKHE/SKHEB-12 | DC 12V | 0.25A | 120 | 400g |
| SKHE/SKHEB-24 | DC 24V | 0.16A | | 600g |
| SKHE/SKHEB-100 | AC 100V | 0.04A | | |
| SKHE/SKHEB-200 | AC 200V | 0.02A | | |

Newly developed reflector for LED revolving warning light



The PATLITE LED revolving warning light uses a unique and patented reflecting system, solely designed for these models. Even though the dispersion characteristics of the LED chip is less than an incandescent bulb, PATLITE's unique design creates an equivalent dispersion effect with the light reflector.



The uniquely designed reflectors not only reflect upward and to the side, but also downward; this cannot be achieved by incandescent bulb type revolving warning lights. The PATLITE LED revolving warning light is suitable for applications where high visibility from a low angle is required.

SKP-A

Revolving Warning Light



Bulb



IP23

Ø138



A Revolving Warning Light featuring corrosion-resistance and a stable and silent rotation.

FEATURES

- Main body is made of a melamine baked finish with a corrosion-proof stainless steel (SUS 304) lens mounting fixture.
- Has the CE mark and conforms to the requirements (for 12V, 24V, 48V DC types only) for the EC directive.
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Dome lens is made of superior impact and heat resistant polycarbonate resin.
- Rotary Mechanism is gear-driven for stable rotation under vibration.
- Available Colors are in Red, Amber, Green, and Blue.

Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|--------------|---------------|---------------------|------------------|----------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| SKP-101A | DC 12V | 2.6A | 140 | 12V 35W | 1 | 0.8kg |
| SKP-102A | DC 24V | 1.2A | | 24V 35W | 2 | |
| SKP-104A | DC 48V | 0.8A | | 48V 35W | 5 | 0.9kg |
| ⊙ SKP-110ADC | DC 100V | 0.35A | 120 | 120V 40W | 36 | |
| SKP-110A | AC 100V | 0.3A | | 220V 30W | 37 | 1.0kg |
| SKP-120A | AC 200V | 0.13A | | | | |

⊙ Available by Special Order

How to Order

SKP--A-

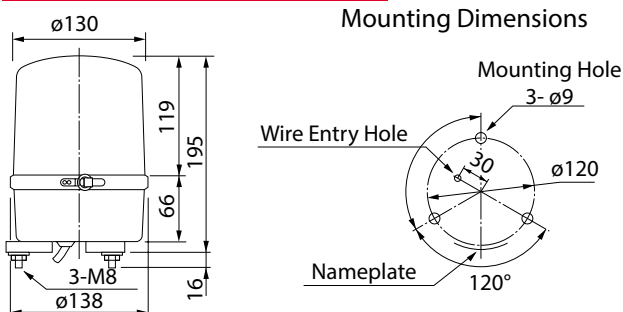
Model Color

Rated Voltage

101 : DC 12V
102 : DC 24V
104 : DC 48V
110 : AC 100V
120 : AC 200V
110ADC: DC 100V (Special Order)

R: Red
Y: Amber
G: Green
B: Blue

Dimensions (Unit: mm)



KP-A

Revolving Warning Light



-  **Bulb**
- IP23**
- Ø162**

Corrosion-proof plastic Revolving Warning Light for a wide range of applications.

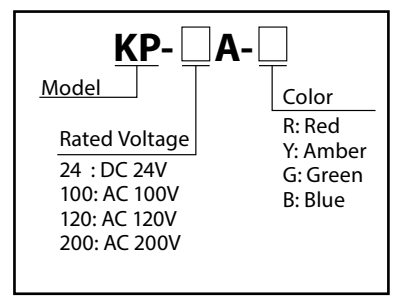
FEATURES

- Extended product lifespan by using vibration-resistance and reliable operation, even under a severely cold environment (-30°C).
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Has the CE mark and conforms to the requirements (for 24V type only) for the EC directive.
- Dome lens is made of superior weather-resistant and light-translucent acrylic resin.
- Mounting Bolts are drip-proof and made of rust-free stainless steel.
- Rotating parabolic reflector to enhance visibility from a distance.
- Main Body is made of special UV and water-resistant resin.
- Available Colors are Red, Amber, Green, and Blue.

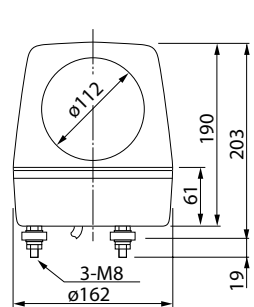
Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|---------|---------------|---------------------|------------------|----------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| KP-24A | 24V DC | 1.2A | 140 | 24V 35W | 2 | 1.0kg |
| KP-100A | 100V AC | 0.3A | | 120V 40W | 6 | |
| KP-120A | 120V AC | 0.4A | | 220V 30W | 37 | |
| KP-200A | 200V AC | 0.13A | 120 | | | 1.2kg |

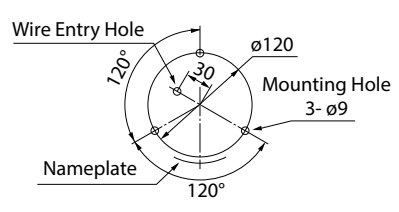
How to Order



Dimensions (Unit: mm)



Mounting Dimensions



RLR

LED Revolving Warning Light



LED



IP66

Ø162



Ideal for forklift, material handling equipment and a great variety of applications.

FEATURES

- Has the CE mark and conforms to the requirements (for 12V, 24V, 48V type) for the EC directive.
- Colors available are Red, Amber, Green, and Blue.
- RLR complies with the RoHS Directive.

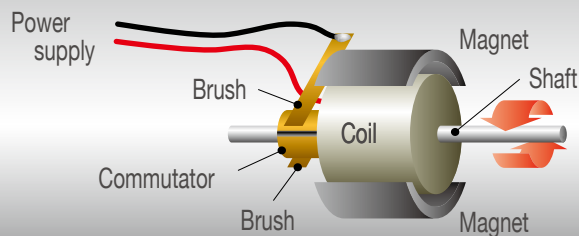
LED + Brushless Motor + Bearing Mechanism



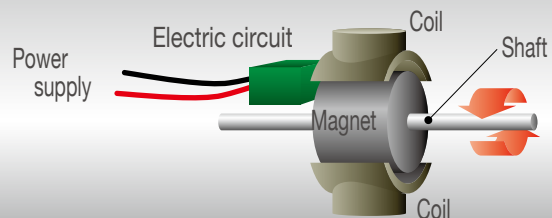
■ Long Life

The RLR has many advantages in comparison to a rotating beacon using incandescent bulbs and the conventional motor. The LED will last approximately 20 to 40 times longer than an incandescent bulb, and in combination with a brushless motor with bearings, allows the RLR to operate from 8,000 hrs to 10,000 hrs, compared to 5,000 hrs for other rotating beacons.

Conventional Motor Construction



Brushless Motor Construction





Vibration Resistance*



High Visibility



High Protection

IP66 TEST PROCEDURE

IPX6= Water is sprayed for at least 3 minutes at a flow rate of 100 L/min from a distance between 2.5m to 3.0m, and from all 360° directions using a 12.5mm diameter jet hose nozzle.

IP6X= The target unit is tested under-pressure in a dust chamber for 8 hours.

How to Order

| | | | | |
|-------------------|--|--|---|--|
| Model Code | Rated Voltage 04 : DC 48V M1 : DC 12-24V M2 : AC 90~250V | RLR- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> | Color R : Red Y : Amber G : Green B : Blue | Mounting Dimensions Blank : $\phi 140$ P : $\phi 120$ |
|-------------------|--|--|---|--|

Typical Vibration Values

2G (19.6m/s²)



Passenger Car

4.5G (44.1m/s²)



Construction Machinery

7G (68.6m/s²)



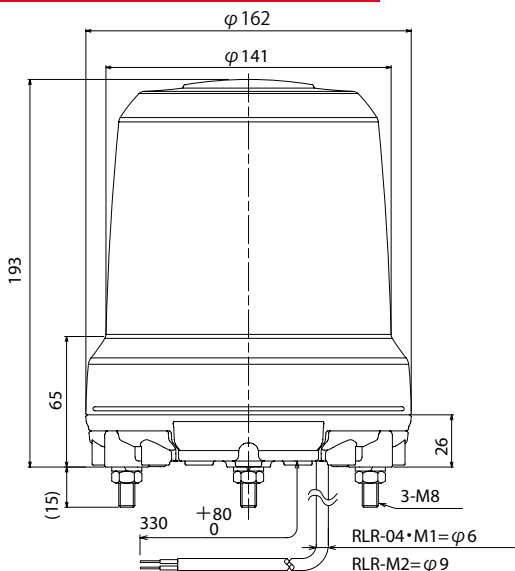
Emergency Vehicle

11G (107.8m/s²)

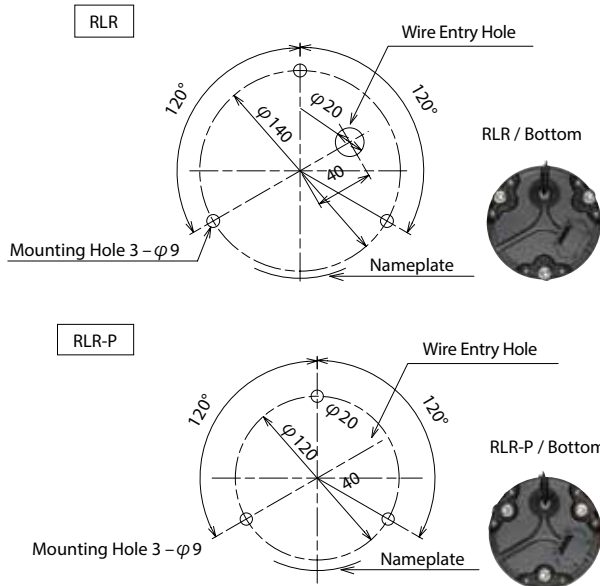


Dump Trucks

Dimensions (Unit: mm)



Mounting Dimensions



Specifications

| Model | Rated Voltage | Operating Voltage Range | Vibration Resistance | Operating Temperature Range | Dome | Mass |
|--------|---------------|-------------------------|---------------------------|-----------------------------|------------|--------|
| RLR-M1 | DC 12-24V | DC 9.5V - 32V | 110m/s ² (11G) | -30 C - +70 C | -R (Red) | 1.0kg |
| RLR-04 | DC 48V | DC 20V - 30V | | | -Y (Amber) | |
| RLR-M2 | AC 90-250V | AC 90V - 250V | 45m/s ² (4.5G) | -10 C - +50 C | -G (Green) | 1.06kg |
| | | | | | -B (Blue) | |

SKHB-1006D



Revolving Warning Light



- Bulb**
- 1 Alarm Sound**
- IP23**
- Ø162**
- Portable**

Portable Revolving Warning Light with dry cell batteries.

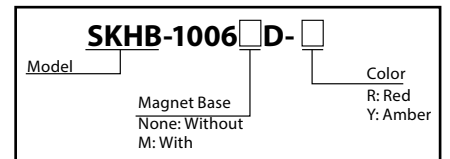
FEATURES

- Built-in operation-selectable alarm with external switch for light rotation only, or with buzzer and light rotation (solenoid buzzer sound).
- Contains five (5) SUM-1 batteries for 4 hours of operation, or five (5) LR20 for about 15 hours.
- Dome is made of superior weather-resistant and light-translucent acrylic resin.
- The 1006MA type includes a powerful magnet for secure placement.
- Installation is for the upright position only.
- Available Colors are Red and Amber.

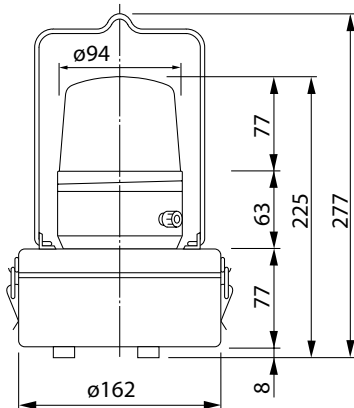
Specifications

| Model | Rated Voltage | Power Consumption | Flash Rate (fpm) | Bulb | | Mass |
|-------------|----------------|-------------------|------------------|---------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| SKHB-1006D | DC6V (SUM-1x5) | 3W | 150 | 6V 3W | 8 | 2.0kg |
| SKHB-1006MD | | | | | | 2.1kg |

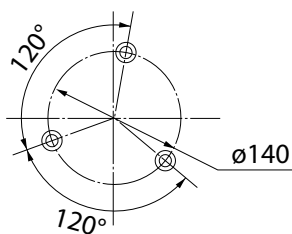
How to Order



Dimensions (Unit: mm)



Mounting Dimensions



SKL-A

Revolving Warning Light



-  **Bulb**
- IP23**
- Ø162**

Basic Large-sized Revolving Warning Light with highly durable housing.

FEATURES

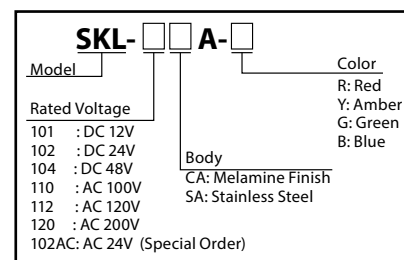
- Main body for the SKL-CA has a scratch-free melamine baked finish, and the SKL-SA is of corrosion-proof stainless steel.
- Has the CE mark and conforms to the requirements (for 12V, 24V, 48V DC type only) for the EC directive.
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Dome is made of a superior impact and heat-resistant polycarbonate resin.
- Available Colors are Red, Amber, Green, and Blue.

Specifications

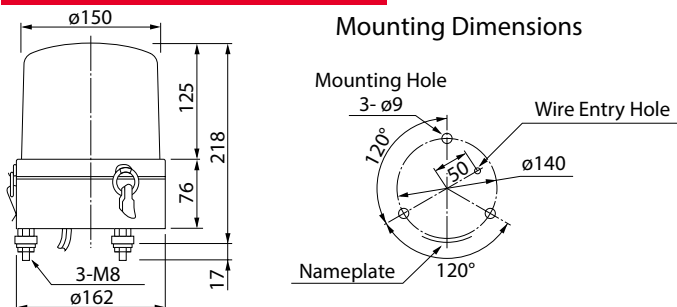
| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|-----------------|---------------|---------------------|------------------|----------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| SKL-101CA/101SA | 12V DC | 2.6A | 140 | 12V 35W | 1 | 1.3kg |
| SKL-102CA/102SA | 24V DC | 1.2A | | 24V 35W | 2 | |
| SKL-104CA | 48V DC | | | 48V 35W | 5 | |
| SKL-110CA/110SA | 100V AC | 0.3A | | 120V 40W | 36 | 1.5kg |
| SKL-112SA | 120V AC | 0.4A | 120 | 220V 30W | 37 | |
| SKL-120CA/120SA | 200V AC | 0.13A | | | | |

⊙ Available by Special Order

How to Order



Dimensions (Unit: mm)



HP

Revolving Warning Light



Halogen 

Ø182

Large Revolving Warning Light with a solid design.

FEATURES

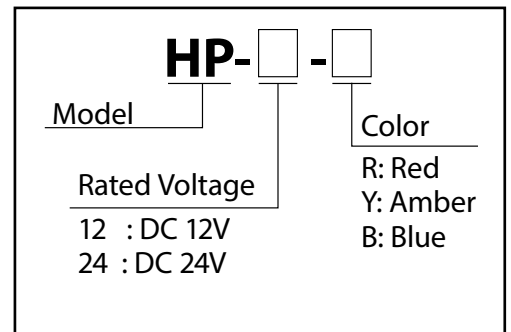
- Dome is made from superior weather-resistant and light-translucent acrylic resin.
- Main body is made of impact and heat resistant ABS resin.
- Available Voltages are DC 12V and DC 24V.
- Available Colors are Red, Amber, and Blue.
- Utilizes a Halogen Bulb (Sold Separately).

Specifications

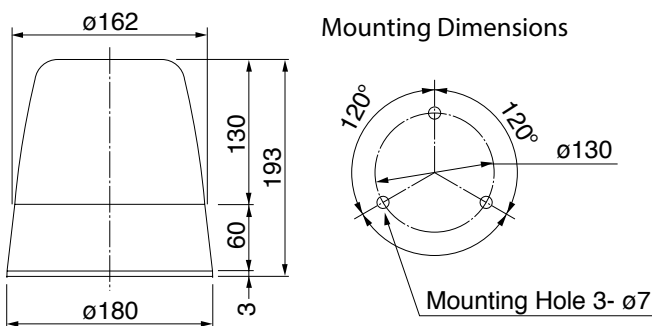
| Model | Rated Voltage | Halogen Bulb | Flash Rate (fpm) | Mass |
|---------|---------------|----------------------|------------------|-------|
| | | Bulb sold separately | | |
| ⊙ HP-12 | 12V/24 DC | 0.5A | 160 | 1.0kg |
| ⊙ HP-24 | | | | |

⊙ Available by Special Order

How to Order




Dimensions (Unit: mm)



KG

Revolving Warning Light



-  **Bulb**
- IP23**
- Ø186**
- Dual-face Reflector**

Large lightweight Revolving Warning Light with dual-face reflector.

FEATURES

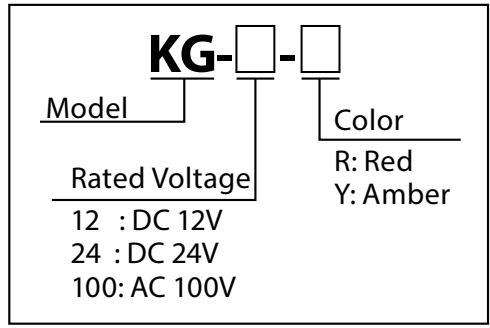
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Main Body is made of a black resin for resistance against harsh weather and UV rays.
- Compact motor with high durability and energy-efficient characteristics.
- The red dome is made of AS resin; the amber dome is made of PS resin.
- Dual-face reflector for a powerful rotary flash.
- Available Colors are in Red and Amber.

*Please contact your local PATLITE representative for other available voltages.

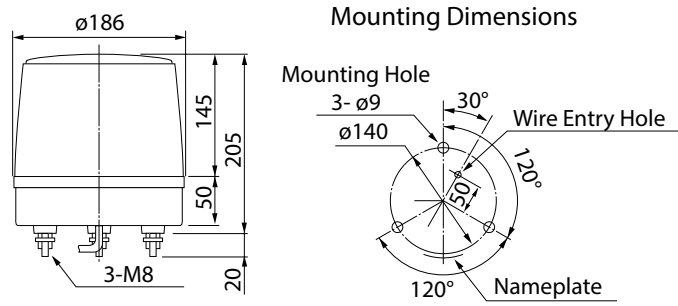
Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|--------|---------------|---------------------|------------------|----------|-----------|------|
| | | | | Ratings | Repl. No. | |
| KG-12 | DC 12V | 2.7A | 180 | 12V 35W | 1 | 700g |
| KG-24 | DC 24V | 1.2A | | 24V 35W | 2 | |
| KG-100 | AC 100V | 0.32A | | 120V 40W | 36 | |

How to Order



Dimensions (Unit: mm)



SKC-A

Revolving Warning Light



Bulb



IP23

Ø187

Dual-face Reflector



Large Revolving Warning Light featuring a powerful dual-face reflector flash.

FEATURES

- Extended product lifespan by using vibration-resistance and reliable operation, even under a severely cold environment (-30°C).
- Main body is made of a melamine baked finish with a corrosion-proof stainless steel (SUS 304) lens mounting fixture.
- Indoors allows upright, inverted, and sideways installation; outdoors allows upright installation only.
- Has the CE mark and conforms to the requirements (for 12V, 24V type only) for the EC directive.
- Dome lens is made of superior weather-resistant and light-translucent acrylic resin.
- The rotary mechanism is belt-driven for an extremely quiet and stable rotation.
- Compact motor with high durability and energy-efficient characteristics.
- Available Colors are in Red, Amber, Green, and Blue.
- Dual-face reflector for a powerful rotary flash.

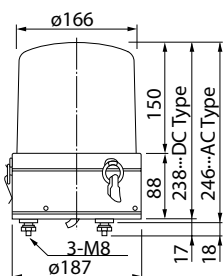
Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|----------|---------------|---------------------|------------------|----------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| SKC-201A | 12V DC | 2.6A | 200 | 12V 35W | 1 | 1.6kg |
| SKC-202A | 24V DC | 1.2A | | 24V 35W | 2 | |
| SKC-210A | 100V AC | 0.3A | | 120V 40W | 36 | 1.8kg |
| SKC-212A | 120V AC | 0.4A | 220V 30W | 37 | | |
| SKC-220A | 200V AC | 0.13A | | | | |

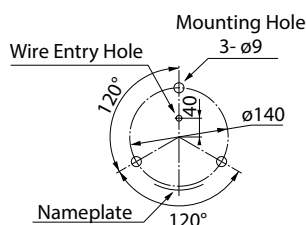
How to Order

| | |
|------------------|---|
| SKC-□ A-□ | |
| Model | Color |
| Rated Voltage | R: Red Y: Amber G: Green B: Blue |
| 201: DC 12V | |
| 202: DC 24V | |
| 210: AC 100V | |
| 212: AC 120V | |
| 220: AC 200V | |

Dimensions (Unit: mm)



Mounting Dimensions



HKFM

Revolving Warning Light



 Halogen

Compact revolving warning light with cigar lighter plug to attach onto your car for road service.

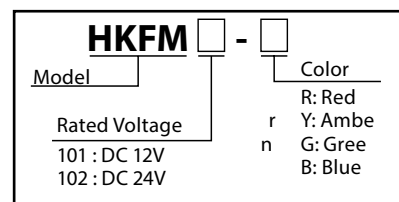
FEATURES

- Large-sized rotating parabolic reflector to enhance visibility from a distance.
- Cigar lighter plug with a 4m cable for easy power connection.
- Available Colors are in Red, Amber, Green, and Blue.
- Rim-drive motor for a quiet and stable rotation.
- Dome lens is made of polycarbonate resin.

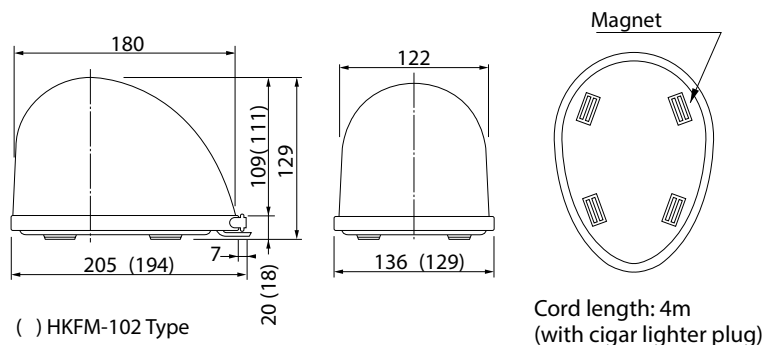
Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | Mass |
|----------|---------------|---------------------|------------------|---------|------|
| HKFM-101 | DC 12V | 2.9A | 230 | 12V 35W | 800g |
| HKFM-102 | DC 24V | 1.9A | | 24V 55W | |

How to Order



Dimensions (Unit: mm)



SKV-A

Revolving Warning Light

CE (12/24V Only)



Bulb 

IP66

Ø204

Corrosion-resistant Revolving Warning Light.

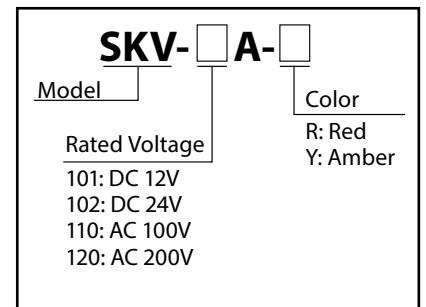
FEATURES

- Main body is made of corrosion-resistant aluminum alloy die-cast with a metal cable gland.
- Dome lens is made of superior impact and heat resistant polycarbonate resin.
- Operating Temperature Range is from -30°C to +80°C.
- Allows upright, inverted, and sideways installation.
- Available Colors are in Red and Amber.

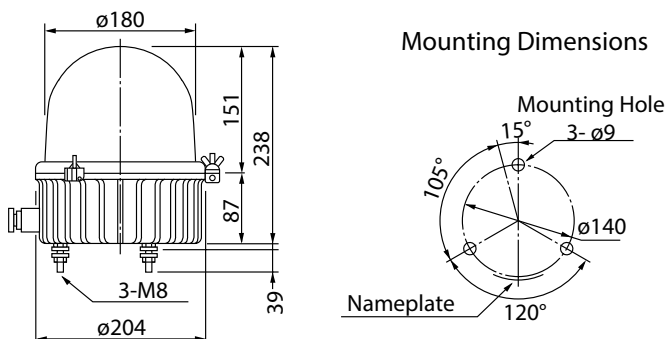
Specifications

| Model | Rated Voltage | Current Consumption | Flash Rate (fpm) | Bulb | | Mass |
|----------|---------------|---------------------|------------------|----------|-----------|-------|
| | | | | Ratings | Repl. No. | |
| SKV-101A | 12V DC | 2.6A | 140 | 12V 35W | 1 | 2.6kg |
| SKV-102A | 24V DC | 1.2A | | 24V 35W | 2 | |
| SKV-110A | 100V AC | 0.3A | 120 | 120V 40W | 36 | 2.8kg |
| SKV-120A | 200V AC | 0.13A | | 220V 30W | 37 | |

How to Order



Dimensions (Unit: mm)



KUS

Cube Tower



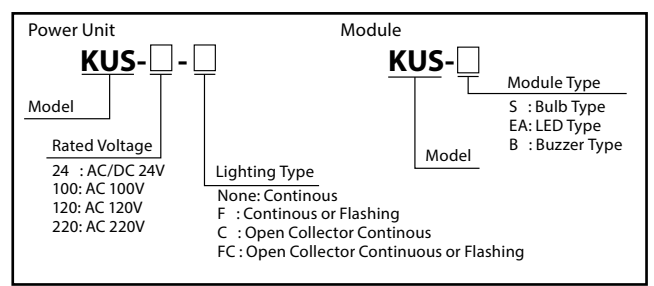
- LED
- Bulb
- 1 Alarm Sound
- 80db at 1m
- IP54 (Except KUS-B)
- 70

The KUS Series cube tower; uses advanced technology with a modular design to combine two different lights on one unit.

FEATURES

- Light modules can be stacked up to 4 tiers in any color combination.
- RoHS Compliance for Models KUS-24, KUS24F, KUS-EA-R/Y/G/B/C.
- Lenses are made of heat and shock resistant polycarbonate resin.
- Each light has a built-in dip switch to control the light on or off.
- Maximum power consumption of the base unit is 21 watts.
- Light and Base units are sold separately.
- IP rating of IP54 (Except the KUS-B)
- KUS-F flashes 60 times a minute.

How to Order



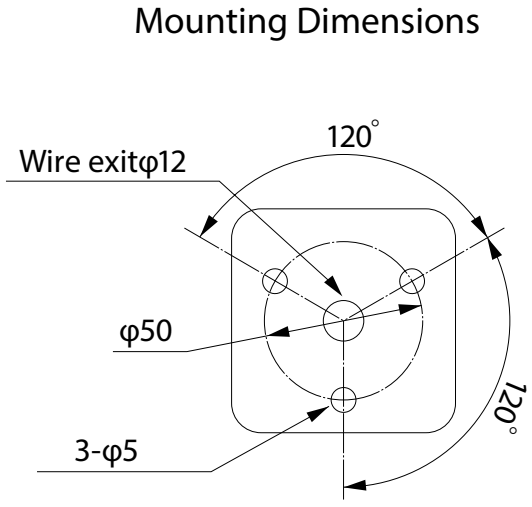
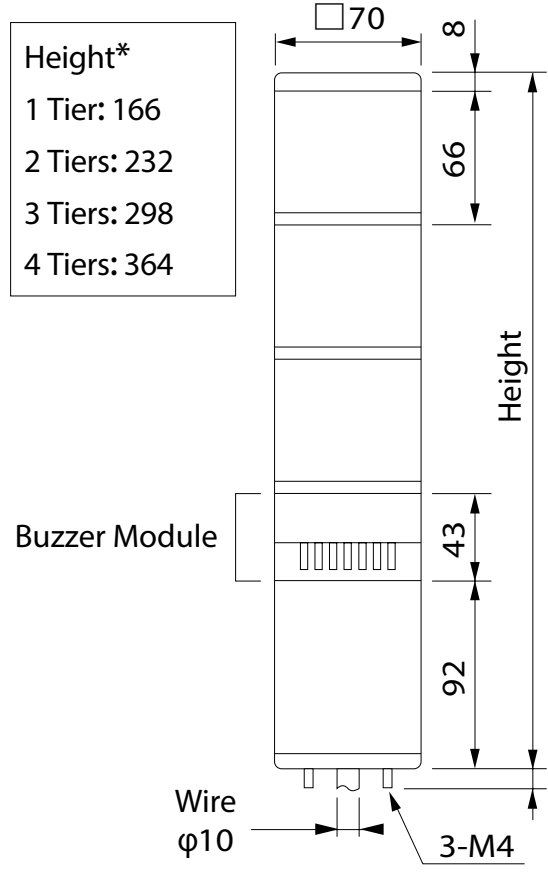
Specifications

| Power Unit | Model | Rated Voltage | Power Consumption |
|--|-------------|---------------|-------------------|
| Continuous Lighting | KUS -24 | AC/DC 24V | 21W |
| | KUS -100 | AC 100V | |
| | KUS -120 | AC 120V | |
| | KUS -220 | AC 220V | |
| Continuous Lighting or Flashing | KUS -24 F | AC/DC 24V | |
| | KUS -100 F | AC 100V | |
| | KUS -120 F | AC 120V | |
| | KUS -220 F | AC 220V | |
| Open-Collector Continuous Lighting | KUS -24 C | AC/DC 24V | |
| | KUS -100 C | AC 100V | |
| | KUS -120 C | AC 120V | |
| | KUS -220 C | AC 220V | |
| Open-Collector Continuous Lighting or Flashing | KUS -24 FC | AC/DC 24V | |
| | KUS -100 FC | AC 100V | |
| | KUS -120 FC | AC 120V | |
| | KUS -220 FC | AC 220V | |

| Model | Rated Voltage | Power Consumption | Bulb | |
|--------------|---------------|-------------------|------------------------|-----------|
| | | | Ratings | Repl. No. |
| KUS-S (Bulb) | DC 24V | 6W | 24V 6W | 19 |
| KUS-EA (LED) | | | R,Y: 1.2W; G,B,C: 0.9W | — |

| Model | Rated Voltage | Power Consumption | Volume |
|-------|---------------|-------------------|--------------|
| KUS-B | DC 24V | 0.5W | 80dB (at 1m) |

Dimensions (Unit: mm)

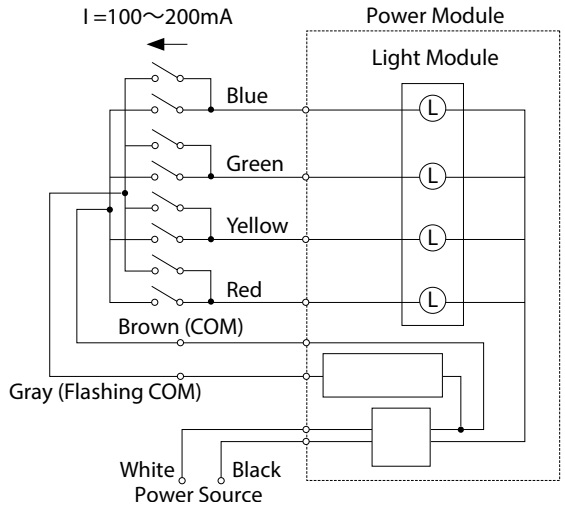


Mounting plate thickness: 10mm

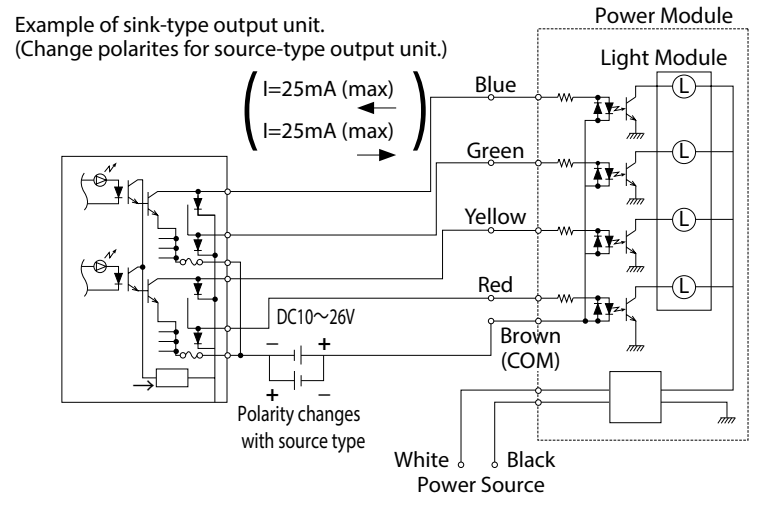
* Buzzer module height not included

Wiring

Contact Input Type
(KUS, KUS-F)



Open-collector Type
(NPN/PNP for KUS-FC,C)





KJS / KJSB

KJS/KJSB

Cube Tower



- Bulb**
- 1** Alarm Sound
- 80** db at 1m (KJSB)
- IP23**
- 82**
- NPN/PNP**
Open-collector

Lightweight Cube Tower featuring a built-in buzzer designed to fit applications for small equipment.

FEATURES

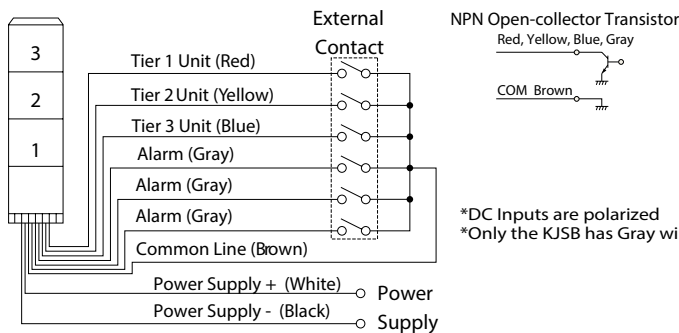
- Built-in Alarm with intermittent buzzer sound and volume of up to 85dB (at 1m).
- Lens is made of superior weather-resistant and light-translucent AS resin.
- Rotating parabolic reflector to enhance visibility from a distance.
- Main body is made of impact and heat resistant ABS resin.
- Available colors are Red, Amber, Green, and Blue.
- Flashing cycle of 160 times/min.
- One spare bulb is included.

How to Order

KJS□-302-RYG

| | | |
|---|--|---|
| <p>Type</p> <p>Blank: No Alarm B: With Alarm</p> <p>Tiers 1~3</p> | <p>Color</p> <p>R: Red Y: Amber G: Green B: Blue (Top to bottom)</p> | <p>Rated Voltage</p> <p>01: DC 12V 02: DC 24V 10: AC 100V 12: AC 120V 20: AC 220V</p> |
|---|--|---|

Wiring

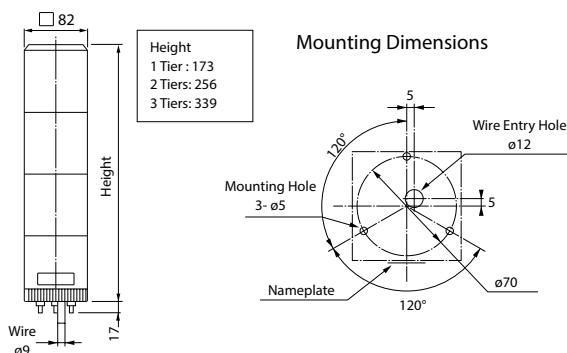


*DC Inputs are polarized
*Only the KJSB has Gray wires for alarm input.

Specifications

| Stack Number | Model | Rated Voltage | Power Consumption | Flash Rate (fpm) | Bulb | |
|--------------|-------------|---------------|-------------------|------------------|---------|-----------|
| | | | | | Ratings | Repl. No. |
| 1 Tier | KJS KJSB | -101 DC 12V | 6W | 160 | 12V 5W | 12 |
| | | -102 DC 24V | 12W | | 24V 10W | 10 |
| | | -110 AC 100V | 8W | | 12V 5W | 12 |
| | | -112 AC 120V | | | 24V 10W | 10 |
| | | -120 AC 200V | | | 12V 5W | 12 |
| 2 Tiers | KJS KJSB | -201 DC 12V | 11W | | 12V 5W | 12 |
| | | -202 DC 24V | 24W | | 24V 5W | 10 |
| | | -210 AC 100V | 16W | | 12V 5W | 12 |
| | | -212 AC 120V | | | 24V 10W | 10 |
| | | -220 AC 200V | | | 12V 5W | 12 |
| 3 Tiers | KJS KJSB | -301 DC 12V | 16W | 12V 10W | 9 | |
| | | -302 DC 24V | 35W | 24V 10W | 10 | |
| | | -310 AC 100V | 23W | 12V 5W | 12 | |
| | | -312 AC 120V | | 24V 10W | 10 | |
| | | -320 AC 200V | | 12V 5W | 12 | |

Dimensions (Unit: mm)



KJ / KJB

Cube Tower



Bulb



1 Alarm Sound

85dB at 1m (KJB)

IP23

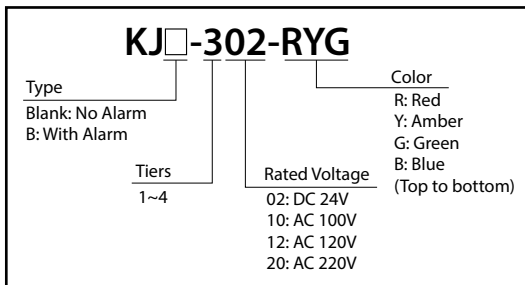
□116

Lightweight Cube Tower featuring a built-in buzzer suitable for various indoor applications.

FEATURES

- Built-in Alarm with intermittent buzzer sound and volume of up to 85dB (at 1m).
- Lens is made of superior weather-resistant and light-translucent AS resin.
- Rotating parabolic reflector to enhance visibility from a distance.
- Main body is made of impact and heat resistant ABS resin.
- Available colors are Red, Amber, Green, and Blue.
- Installation is in the upright position only.
- Flashing cycle of 130 times/min.
- One spare bulb is included.

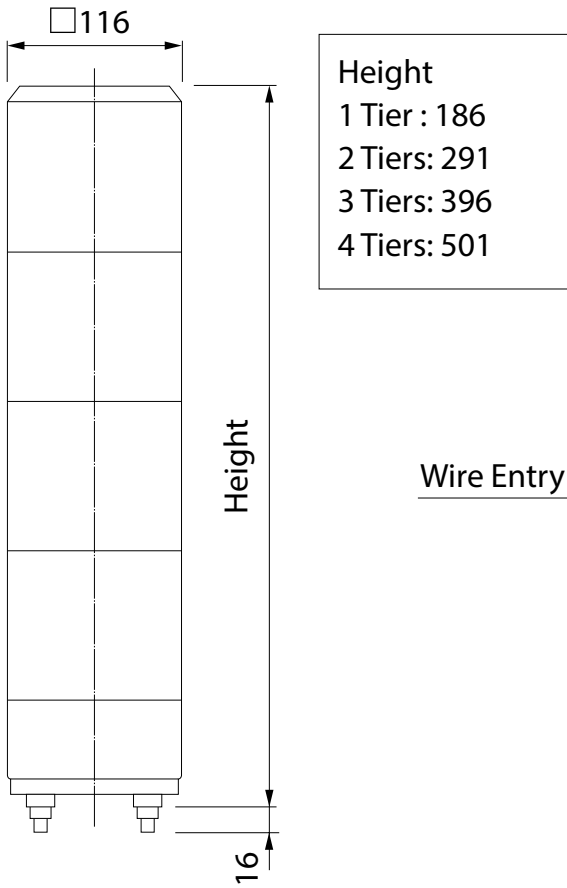
How to Order



Specifications

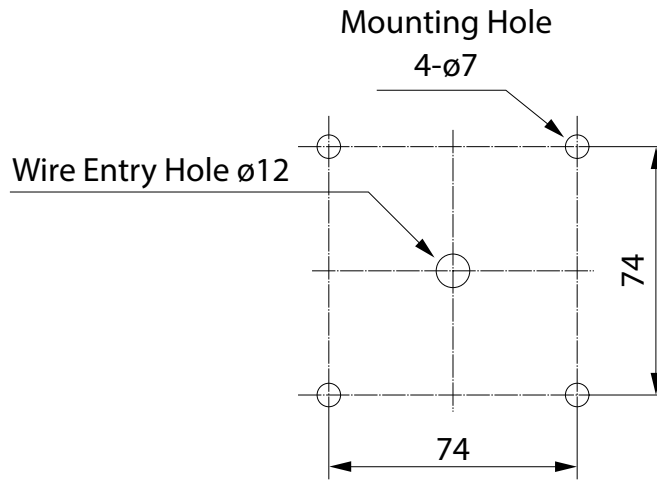
| Stack Number | Model | Rated Voltage | Power Consumption | Flash Rate (fpm) | Bulb | | |
|--------------|--------|---------------|-------------------|------------------|---------|-----------|----|
| | | | | | Ratings | Repl. No. | |
| 1 Tier | KJ KJB | -102 | DC 24V | 13.5W | 130 | 24V 10W | 10 |
| | | -110 | AC 100V | 6W | | 12V 5W | 12 |
| | | -112 | AC 120V | 7W | | | |
| | | -120 | AC 200V | 5.5W | | | |
| 2 Tiers | KJ KJB | -202 | DC 24V | 25.54W | 24V 5W | 10 | |
| | | -210 | AC 100V | 11W | 12V 5W | 12 | |
| | | -212 | AC 120V | 13W | | | |
| | | -220 | AC 200V | 9.9W | | | |
| 3 Tiers | KJ KJB | -302 | DC 24V | 37.5W | 24V 10W | 10 | |
| | | -310 | AC 100V | 16W | 12V 5W | 12 | |
| | | -312 | AC 120V | 18W | | | |
| | | -320 | AC 200V | 14.3W | | | |
| 4 Tiers | KJ KJB | -402 | DC 24V | 49.5W | 24V 10W | 10 | |
| | | -410 | AC 100V | 21W | 12V 5W | 12 | |
| | | -412 | AC 120V | 26W | | | |
| | | -420 | AC 200V | 18.7W | | | |

Dimensions (Unit: mm)



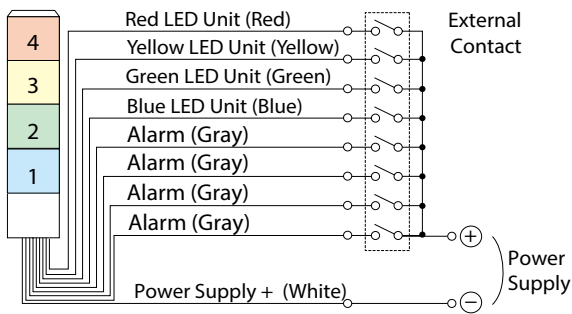
Height
 1 Tier : 186
 2 Tiers: 291
 3 Tiers: 396
 4 Tiers: 501

Mounting Dimensions

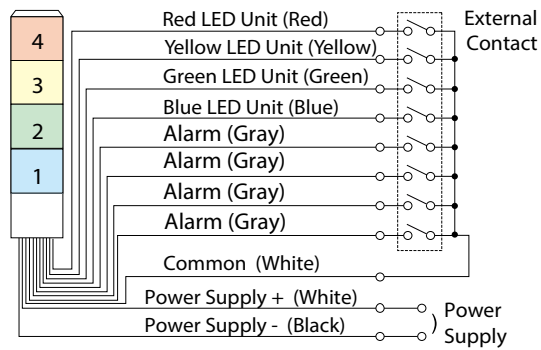


Wiring

KJ/KJB (24V DC)



KJ/KJB (100V AC, 220V AC)

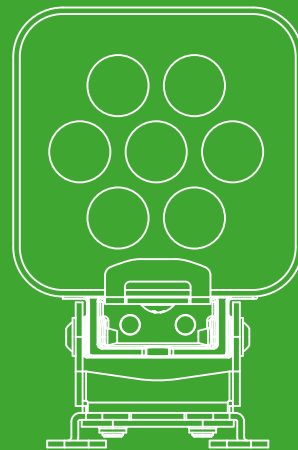


*KJ-110/112/120 are voltage-contact type, therefore have no alarm signal wires.
 *Only the KJB has Gray wires for alarm input.

| Current Consumption and Contact Capacity per Module | | | | | |
|---|---------------------|----------------|---------------------------|--------------------|---------------------------|
| Rated Voltage | Signal Wire Current | Inrush Current | External Contact Capacity | Alarm Wire Current | Alarm Wire Inrush Current |
| 24V DC | 0.42A | 4.6A | 5A or more | 60mA | 500mA |
| 100VAC/120VAC/220VAC | | | | | |



LED Lights



CLA

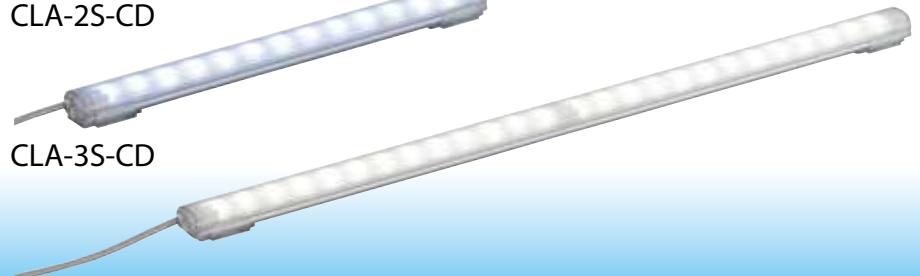
LED Light Bar



CLA-2S-CD



CLA-3S-CD



CLA-6S-CN

Daylight, Amber
Natural White



IP66/67/69K

More than a diffusion LED light bar, it can be used in places like the food-processing industry with its protection rating of "IP69K", which can endure high-pressurized hot water washing.

- Bright, long lasting LED's.
- Suitable for food, beverage and pharmaceutical applications where high-pressure, 80°C high-temperature wash-downs are required. Also meets IP66/67 standards.
- The radiating temperature is reduced to 40 degrees or less (34% reduction in comparison to a 20W fluorescent light), increasing environmental efficiency.
- Six lengths in the range from 100 to 1200mm to choose from, with three colors (Daylight, Natural White, Amber), and four types of attachments, including a magnet one, offering a potential for various applications.
- The operating temperature range from -40°C to +60°C allows installation in sub-freezing temperatures, such as walk-in freezers.
- It is constructed with strong polycarbonate resin, which is resistant to shock.
- Corresponds to Europe's RoHS Directive.
- Obtained certification for ECOLAB.
- Conforms to CE requirements.
- UL Listed (File No. E306141).

Luminous Color

With a high-intensity lumination, its suitable for applications such as lighting processing machinery workspace, for lighting up a video inspection system to light up more details, etc.



A 6800K daylight light bar at a distance of 50 cm from the center of irradiation has measured a maximum brightness of 400lx.

How to Order

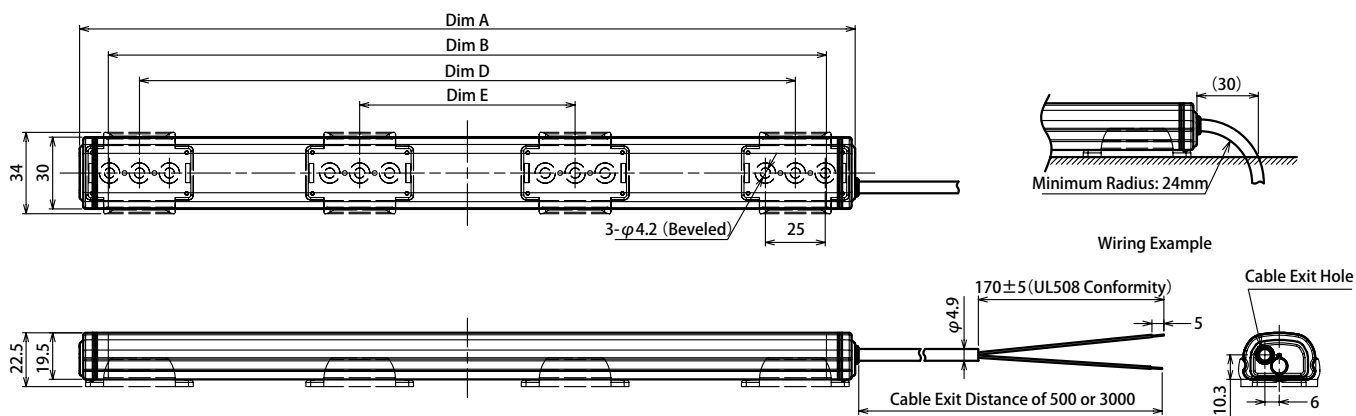
| | |
|--|---------------------------|
| CLA <input type="checkbox"/> S-24- <input type="checkbox"/> - <input type="checkbox"/> | |
| Model | Cable Length |
| Light Bar Length | Blank : 0.5m 30 : 3.0m |
| 1 : 100mm | Luminous Color |
| 2 : 200mm | -CD (Daylight) |
| 3 : 300mm* | -CN* (Natural White) |
| 6 : 600mm | -Y* (Amber) |
| 9 : 900mm | |
| 12 : 1,200mm | |
| * -Y is only available in 300mm lengths | |
| * -CN is only available in 600 and 900mm lengths. | |

CLA-CN (Natural White: 4800K)

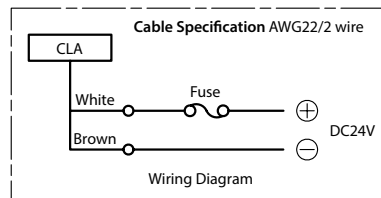
CLA-CD (Daylight: 6800K)

CLA-Y (Amber)

Dimensions (Unit: mm)



| Model Name | Dim A | Dim B | Dim D | Dim E | Standard Bracket SZ-310AR |
|------------|--------------|---------------|----------------|----------------|---------------------------|
| | Total Length | Lighting Area | Mounting Pitch | Mounting Pitch | |
| CLA1S | 124 | 100 | 74 | — | 2 pcs. |
| CLA2S | 224 | 200 | 174 | — | |
| CLA3S | 324 | 300 | 274 | — | |
| CLA6S | 624 | 600 | 574 | — | |
| CLA9S | 924 | 900 | 874 | 290 | 4 pcs. |
| CLA12S | 1,224 | 1,200 | 1,174 | 390 | |



Options



Standard

Rear Attachment
(Screw Mount)
Model SZ-310AR



Option

Rear Attachment
(Magnetic Mount)
Model SZ-310ARM



Option

Side Attachment
(Screw Mount)
Model SZ-310AS



Option

Side Attachment
(CLB-24N Compatible)
Model SZ-310ASB

Specifications

| Model | Luminous Color | Rated Voltage | Vibration Resistance | Operating Temperature Range | Rated Current Consumption | Center Radiation (lx/50cm) | Main Body Material | Protection Rating | Mass |
|----------------|----------------|--------------------|-----------------------|--------------------------------|---------------------------|----------------------------|--------------------|-------------------|------|
| CLA1S -24 -CD | Daylight | DC 24V (Polarized) | 19.6 m/s ² | -40°C - +60°C (RH 90% or less) | 104mA | 140 | Polycarbonate | IP66/67/69K | 80g |
| CLA2S -24 -CD | Daylight | | | | 208mA | 270 | | | 130g |
| CLA3S -24 -CD | Daylight | | | | 240mA | 400 | | | 180g |
| CLA3S -24 -CN | Natural White | | | | | 220 | | | |
| CLA3S -24 -Y | Amber | | | | | | | | |
| CLA6S -24 -CD | Daylight | | | | 480mA | 650 | | | 340g |
| CLA6S -24 -CN | Natural White | | | | 720mA | 810 | | | 500g |
| CLA9S -24 -CD | Daylight | | | | | | | | |
| CLA12S -24 -CD | Daylight | | | | | | | | |

CLK

LED Light Bar



(M12 type is UL Recognized)
(SG/SA type has no UL certifications)



Daylight
Natural White

IP66G/67G/69K

M-12 Daisylink

(Cable not included)

Water, Oil and Chemical Resistant LED Light Bar with an Illuminance of 2,100lx. (Measurement based on CLK6S-24AG-CD)

FEATURE

- Attained the IP69K standard for the meat/food processing, beverages and medicine manufacturing industries which demands the waterproofing performance. It also corresponds to IP66G/67G standards.
- Special design to reduce "Blinding Light" effect, reducing the risk of retinal damage (EN62471-2 for Photobiological Safety of Lamps and Lamp Systems).
- The product lineup includes three sizes (200mm, 300mm, 600mm), two colors (Daylight, Natural White), and different series (Side-exit Cable; M12 Quick-disconnect; Aluminum Alloy and Stainless Steel Body) for various applications.
- The operating temperature range from -40°C to +60°C allows installation in sub-freezing temperatures, such as walk-in freezers.
- Slim Profile
- Corresponds to Europe's RoHS Directive.
- Conforms to CE requirements.
- UL Listed (File No. E306141, M12 type is UL Recognized, SG/SA type is not UL certified).
- Passed IEC 62471

Specifications

| Specifications/Material | Water and Oil Resistance/Aluminum Alloy | | | | | | Water and Chemical Resistance/ SUS316 Stainless Steel | | |
|-----------------------------|---|-----------|-----------|----------------------|----------------|----------------------|--|----------------------|-----------|
| Lens Material | Tempered Glass | | | | | | Specially-treated Lens \diamond | | |
| Model | 2S-AG | 3S-AG | 6S-AG | 3C-AG | 3CL-AG | 6C-AG | 6CL-AG | 3C-SG | 3C-SA |
| Lens Size | 200mm | 300mm | 600mm | 300mm | | 600mm | | 300mm | |
| LED Color | Daylight: 6,500K: CD | | | | | | | | |
| Color | \bullet | \bullet | \bullet | \bullet | \bullet | \bullet | \bullet | \bullet | \bullet |
| | Δ | \bullet | Δ | \bullet | \bullet | \bullet | — | — | \bullet |
| Center Illumination (@1m) | 820lx | 1,200lx | 2,100lx | 1,200lx | | 2,100lx | | 1,200lx | |
| Connection Type | Side-exiting Cable, L=0.5m | | | M12 Quick Disconnect | M12 Daisy Link | M12 Quick Disconnect | M12 Daisy Link | M12 Quick Disconnect | |
| Power Consumption | 8.4W | 12.5W | 25W | 12.5W | | 25W | | 12.5W | |
| Rated Voltage | DC24V (Polarized) | | | | | | | | |
| Operating Temperature Range | -40°C - +60°C (RH 90% or less) | | | | | | | | |
| Protection Rating | IP 66G/67G (IEC 60529)/IP69K (DIN 40050 Part 9) | | | | | | | | |

Δ : Inquire before Ordering

\diamond : Specially-treated lens has three layers embedded; PMMA, Shatter-proof Film, Tempered Glass

How to Order

Model Code

Illumination Area Size
2: 200mm 3: 300mm 6: 600mm

Model **CLK** -24 -

LED Color
CD: Daylight, CN: Natural White

Wiring Method
S: Side-exiting Cable C: M12 Cable CL: M12 Daisy Link

Body Material AG: Aluminum & Glass
SG: Stainless Steel & Glass
SA: Stainless Steel & Special Lens

Oil Exam

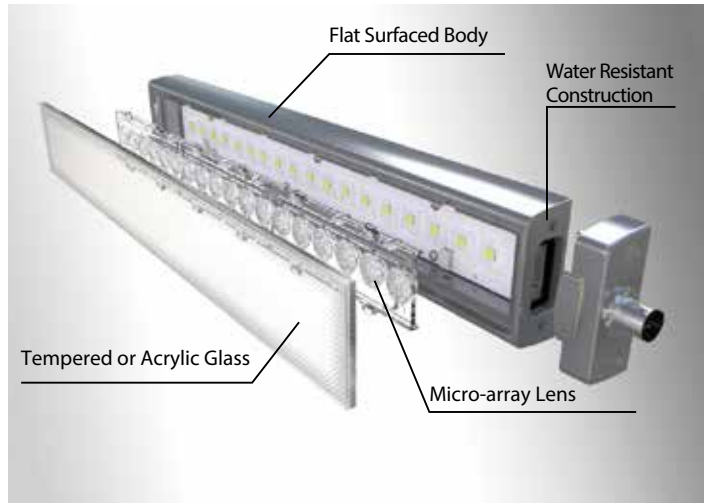
It has passed the oil resistant test from the following common cutting oils.

| Company | Oil Type |
|-------------------------------------|---------------------------|
| Hangsterfer's | Hangsterfer's S-500 |
| Yushiro Chemical Industry Co., Ltd. | Yushiroken Synthetic #663 |
| Castrol | Syntilo 9954 |
| BlaserSwisslube Inc. | Blasocut BC35LFSW |

Confirmation in result of swelling, contraction, dissolution, exfoliation, separation, cracks, and discoloration by the accelerated impregnation examination with the oil types indicated in the table on the left for diluted oil at 55°C for 240 hours (ten days) was made.

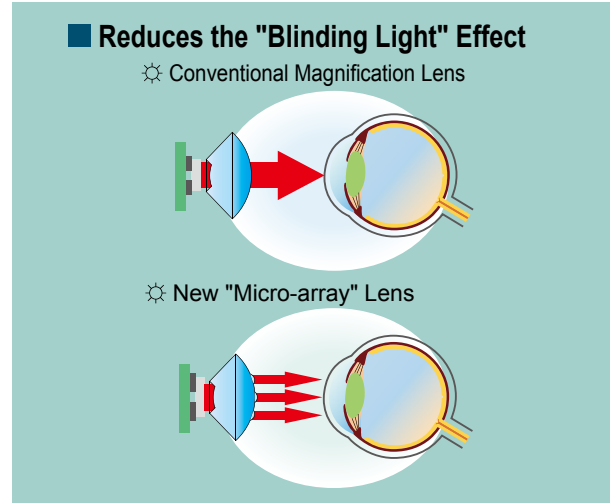
Due to the additive agents in oil, the application of oils other than the ones mentioned may influence physical properties, therefore, please inquire in advance.

* The mentioned company names, product names, trademarks, etc. are the registered trademarks or trademarks in Japan for each company, and/or other countries.



Angled Body and Flat Surface

The side body angle was designed to prevent dirt accumulation, and for water and oil to roll off the surface. The LED lens retains a simple flat-surface for lighting and to help when wiping it down.



Reduces the "Blinding Light" Effect

This design conforms to the Photobiological Safety of Lamps and Lamp Systems (Compliance :EN62471- 2) in the Exempt Risk Group, which determines that no immediate retina damage is done.



One-touch Installation

Just sliding the body onto the bracket makes attachment easy; and it locks in place with a locking screw (which is hidden from the front). (Aluminum Body Only)

Angle Adjustment Bracket

The Worklight can be freely adjusted up to 60° up and down from the center. (With a scale at 10° step marks and screws to lock it into place.)

Surface-mounting Bracket

A space-saving flush-mount bracket. (Limited board thickness and lead wire specification of 6mm or less; M12 connector specification of 3mm or less) (Models 3 S-AG/3 C-AG Only)

Options

Refer to Page 192 for "Optional Parts"

Product Lineup

| Specifications Length | Side-exiting Cable Series (S) | M12 Quick Disconnect Series (C) | M12 Quick Disconnect Daisy Link Series (CL) | Stainless Steel (SUS) Body Series (CSG/C-SA) |
|--------------------------|-------------------------------|---------------------------------|---|--|
| 200 mm | 2S (-CD) (-CN) | _____ | _____ | _____ |
| 300 mm | 3S (-CD) (-CN) | 3C (-CD) (-CN) | 3CL (-CD) (-CN) *Up to 4 Units | 3C (-CD) (-CN) |
| 600 mm | 6S (-CD) | 6C (-CD) (-CN) | 6CL (-CD) (-CN) *Only 1 Unit | _____ |

CLN

LED Work Light



Daylight
Warm White



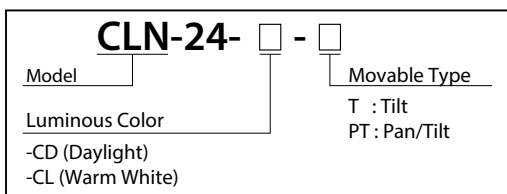
IP66G/67G/69K

Water and Oil resistant high-power LED Work Light with an illuminance of 820 lx. Industry's thinnest design at 22.2mm.

*The industry's first based on corporate investigation

- Made of aluminum alloy and tempered glass which is resistant to water, oil and coolants.
- Special design disperses heat radiation with illumination to surpass a 40W light bulb.
- The product lineup includes two colors (Daylight, Warm White) and two bracket options of Tilt (forward and back) or Pan & Tilt (forward, back and swivel left & right) to adapt to various scenarios.
- The operating temperature range of -40 to +60°C allows installation in sub-freezing temperature environments, such as cold storage warehouses.
- Conforms to CE and RoHS requirements.
- UL Listed (File No. E306141).

How to Order

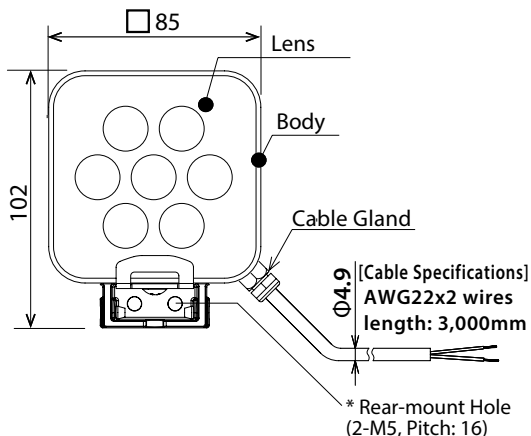


Specifications

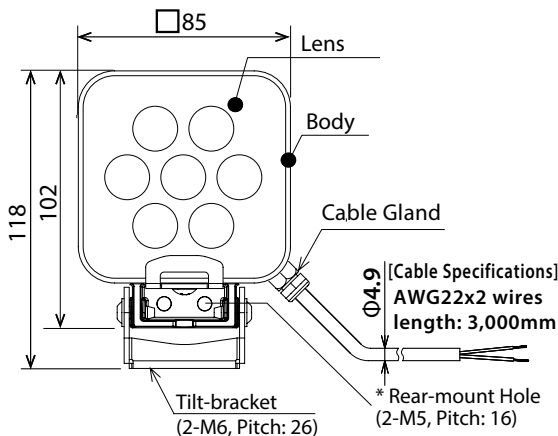
| Model | CLN-24- <input type="checkbox"/> -T | | CLN-24- <input type="checkbox"/> -PT | |
|--|--|-----------------|--------------------------------------|-----------------|
| | CD (Daylight) | CL (Warm White) | CD (Daylight) | CL (Warm White) |
| Color Code (Color) | CD (Daylight) | CL (Warm White) | CD (Daylight) | CL (Warm White) |
| Color Temperature (typ.) | 6500K | 2700K | 6500K | 2700K |
| Illumination (typ.) (Centered at DC 24V) | 820 lx | 620 lx | 820 lx | 620 lx |
| Total Luminous Flux (typ.) | 550 lm | 330 lm | 550 lm | 330 lm |
| Rated Voltage | DC 24V (Polarized) | | | |
| Operating Voltage Range | DC 24V ±10% | | | |
| Protection Rating | IP66G/67G (JIS C 0920)/69K (DIN 40050 part 9) (excluding Cable ends) | | | |
| Mounting Location/Direction | Indoor / Any Direction | | | |
| Mass (Tolerance ±10%) | 360g | | 430g | |

Dimensions (Unit: mm)

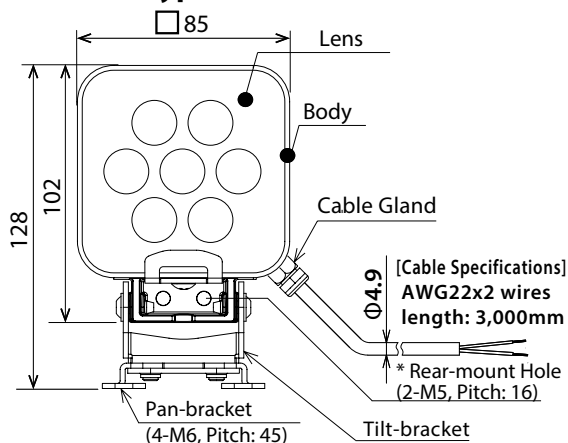
• Rear-mount Type (T/PT)



• Tilt Type (T)



• Pan/Tilt Type (PT)



Oil Exam

It has passed the oil resistant test from the following common cutting oils.

| Company | Oil Type |
|-------------------------------------|---------------------------|
| Hangsterfer's | Hangsterfer's S-500 |
| Yushiro Chemical Industry Co., Ltd. | Yushiroken Synthetic #663 |
| Castrol | Syntilo 9954 |
| BlaserSwisslube Inc. | Blasocut BC35LFSW |

Confirmation in result of swelling, contraction, dissolution, exfoliation, separation, cracks, and discoloration by the accelerated impregnation examination with the above-mentioned oil type for diluted oil at 55°C for 240 hours (ten days) was made.

Due to the additive agents in oil, the application of oils other than the ones mentioned may influence physical properties, therefore, please inquire in advance.

* The mentioned company names, product names, trademarks, etc. are the registered trademarks or trademarks in Japan for each company, and/or other countries.

Features

Tilt Type (T Type)



Floor Mount Example



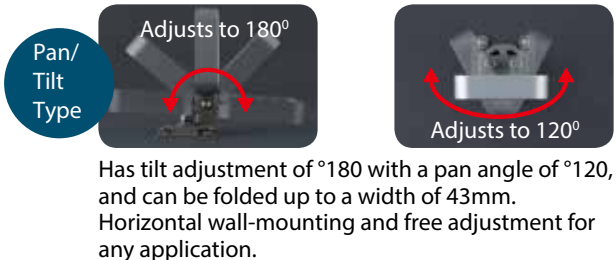
Wall Mount Example



Ceiling Mount Example



Pan/Tilt Type (PT Type)



Floor Mount Example



Wall Mount Example



Ceiling Mount Example



※ The tilt & pan/tilt brackets can also be removed for Rear Attachment applications.

CWA

LED Light Bar



Daylight 

IP65

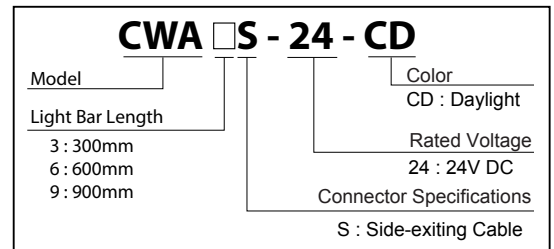
Affordable replacement for fluorescent lighting.

An affordable replacement, the slim LED light bar can outperform a conventional fluorescent lamp. The protection rating of IP65 is a standard which allows installation in most common environments.

FEATURES

- Available for DC 24V applications
- Long-lasting LED's greatly reduce maintenance costs
- Total luminous flux of 350lm, 100lx luminance at 1m (Voltage: DC24V)
- A set of two stainless-steel mounting brackets is a standard accessory
- Operating temperature range from -30 to +60 degrees C.
- LED color temperature is Daylight (6500K)

How to Order



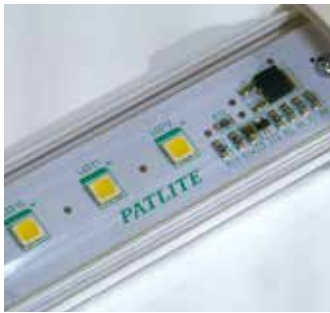
Specifications

| Model | CWA3S-24-CD | CWA6S-24-CD | CWA9S-24-CD | |
|-------------------------------|---|-------------|-------------|--------|
| Luminous Color | Daylight | | | |
| Color Temperature (typ.) | 6500K | | | |
| Illuminance (at DC24V) | 1.0m | 440 lx | 800 lx | 990 lx |
| Total Luminous Flux (typ.) | 350 lm | 700 lm | 1050 lm | |
| Operating Voltage Range | 24VDC ±10% | | | |
| Current Consumption | 180mA | 360mA | 540mA | |
| Rated Power Consumption | 6W | 12W | 18W | |
| Operating Ambient Temperature | -30°C - +60°C | | | |
| Operating Ambient Humidity | 90% RH or less, no condensation | | | |
| Main Unit Material | Body: Polycarbonate Resin; Packing: Silicon | | | |
| Cable Length | 3 meters | | | |
| Mounting Location | Indoors | | | |
| Protection Rating | IP65 (Cable ends not included) | | | |
| Insulation Resistance | 500V DC 5MΩ or more | | | |
| Withstand Voltage | 500VAC for 1 minute (Between terminals and screw) | | | |
| Vibration Resistance | 30Hz 19.6m/s ² | | | |
| Mass (Tolerance ±10%) | 215g | 385g | 540g | |

Standard Accessory



Highly reliable LED chips are used

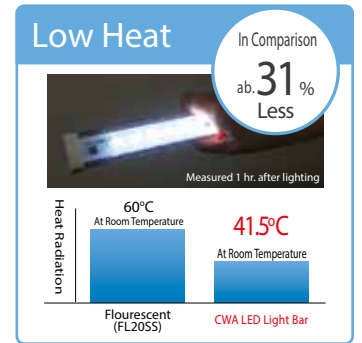
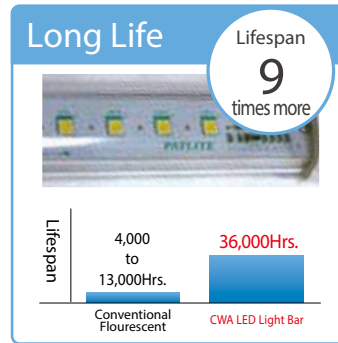
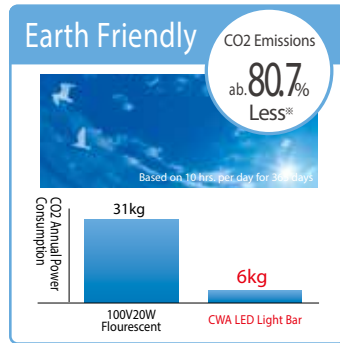
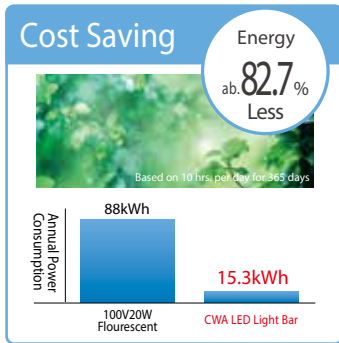
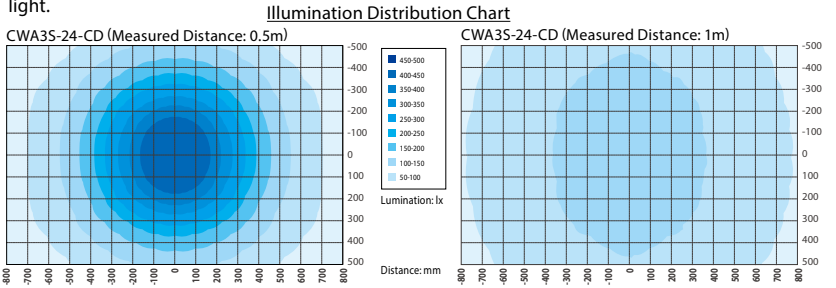


High-definition LED chip

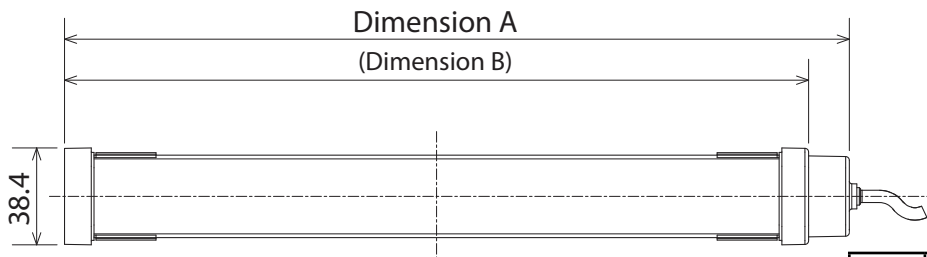
The highly reliable LED chip, which is the core of LED lighting, has nearly 10 times (about 40,000 hours) the lifespan (based on LED brightness of 70%) in comparison to the common fluorescent light, it also does not contain any mercury.

A uniform light that subdues glare

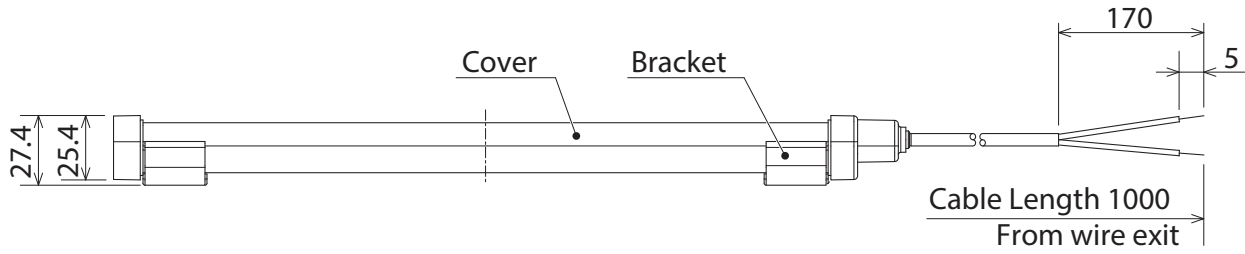
In comparison to an LED luminous source, we take advantage of the straight beam optical characteristic of the LED without dropping brightness or overdoing it, but reproducing a natural light.



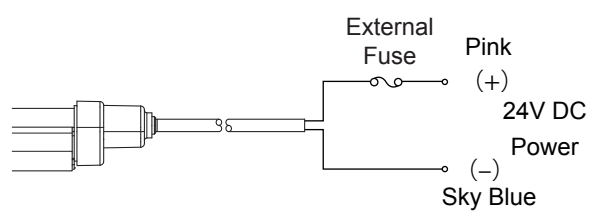
Dimensions (Unit: mm)



| Model Name | Dimension A | Dimension B |
|------------|--------------|---------------|
| | Total Length | Lighting Area |
| CLA3S | 315.5 | 300 |
| CLA6S | 621.0 | 600 |
| CLA9S | 916.5 | 900 |

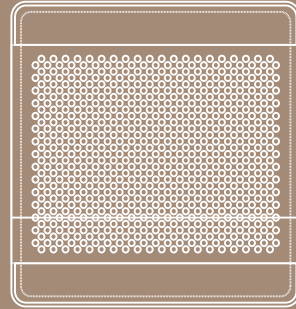


Wiring

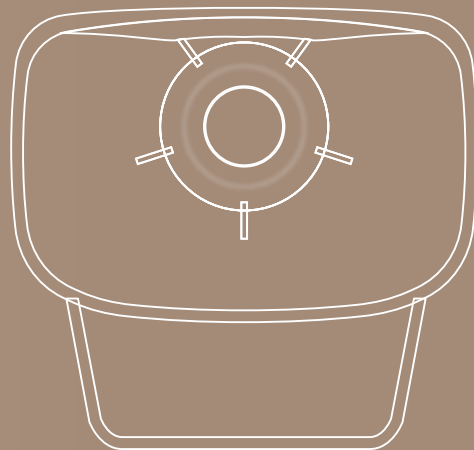


[Enforced]

There is no protection rating for the area surrounding the tip of the cable. To ensure insulation of water intrusion, the use of fillers (such as silicon, etc.) to plug up the tip part is recommended.



Alarm Products





Signal Horn



90dB at 1m (BM-H Type)

2 Channels

IP34 (BM-D Front Only)

Ø30

**NPN/PNP
Open-collector**



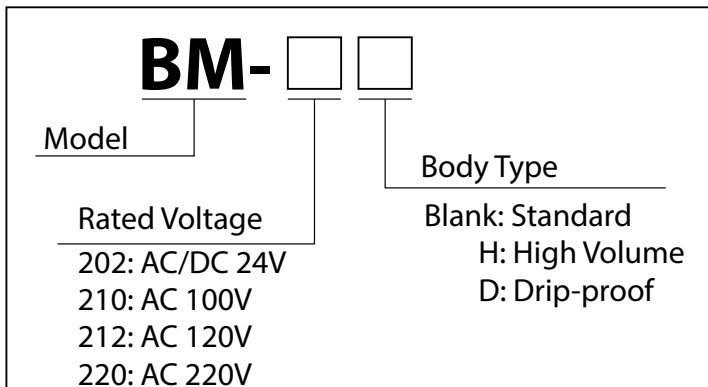
Compact Signal Horn designed to integrate with control panel, switchboard and other production equipment applications.

FEATURES

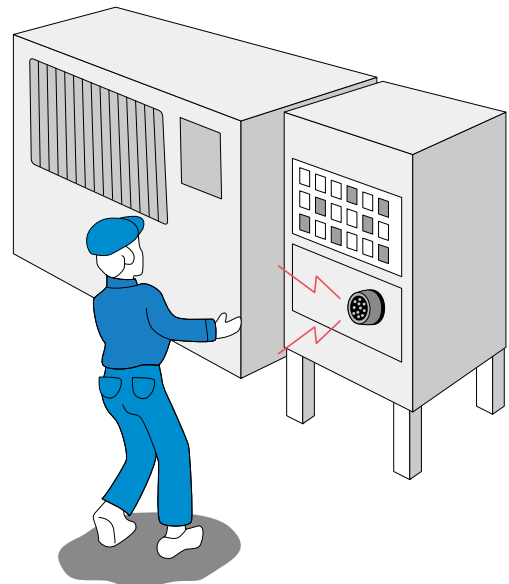
- Built-in Alarm with an audible sound of up to 90dB (at 1m*1).
- Has two selectable alarm sound patterns.
- Three Types to choose from; Standard (BM), High Volume (BM-H), Drip-proof (BM-D)
- Body is compact and lightweight (100g).
- The 24V type is compatible with NPN and PNP inputs.
- Has the CE mark and conforms to the requirements for the EC directive. (For AC/DC 24V only.)

*1 Model BM-H: 90dB (at 1m); Model BM: 85dB (at 1m); Model BM-D: 80dB (at 1m)

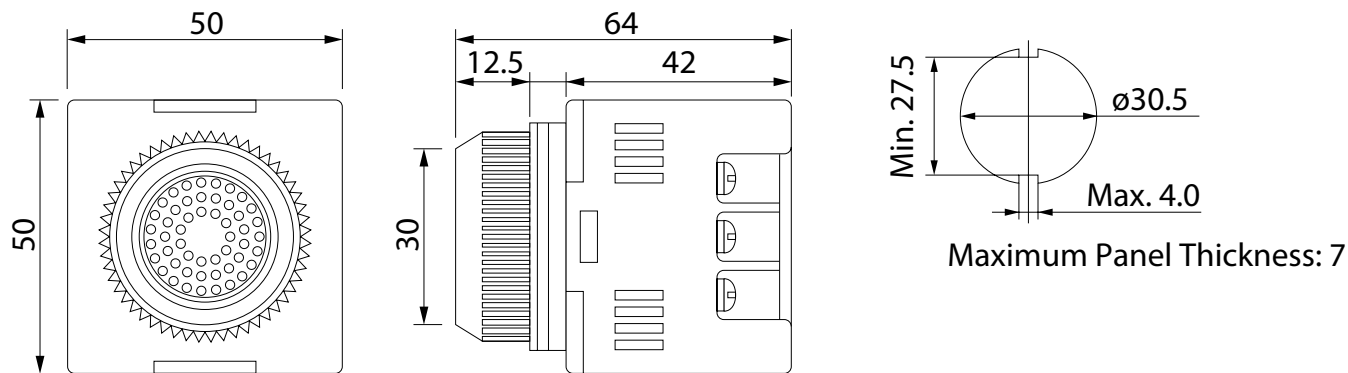
How to Order



Application Example

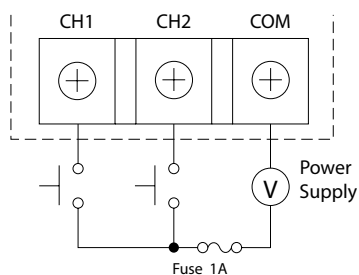


Dimensions (Unit: mm)



Wiring

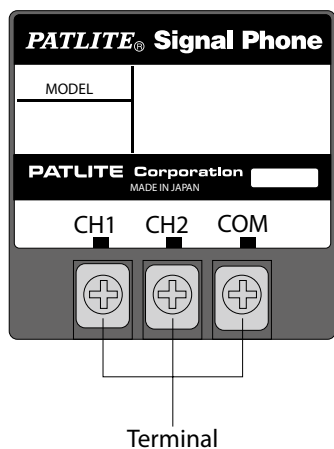
Terminal Bus Input



• Channel Priority

CH1 > CH2
 CH1 has priority when CH2 and CH1 are activated simultaneously

Rear View



| |
|--|
| External Contact Capacity : No less than 100mA |
| Auxiliary Input : Voltage Contact |
| Input Channels : 2 |

Specifications

| Type | Model | Rated Voltage | Voltage Range | Power Consumption | Max. Volume (at 1m) | Operating Temperature Range | Protection Rating | Mass |
|-------------|----------|---------------|---------------|-------------------|---------------------|-----------------------------------|-------------------|------|
| Standard | BM -202 | AC/DC 24V | AC/DC 22V-26V | 0.4W | 80dB | -10°C - +60°C (RH 85% or less) | IP30 | 100g |
| | BM -210 | AC 100V | AC 90V-110V | 2.5W | 85dB | | | |
| | BM -220 | AC 220V | AC 200V-240V | 3.5W | | | | |
| High Volume | BM -202H | AC/DC 24V | AC/DC 22V-26V | 0.4W | 85dB | | | |
| | BM -210H | AC 100V | AC 90V-110V | 2.5W | 90dB | | | |
| | BM -212H | AC 120V | AC 108V-132V | | | | | |
| | BM -220H | AC 220V | AC 200V-240V | | | | 3.5W | |
| Drip-proof | BM -202D | AC/DC 24V | AC/DC 22V-26V | 0.4W | 75dB | | IP34 | |
| | BM -210D | AC 100V | AC 90V-110V | 2.5W | 80dB | | | |
| | BM -220D | AC 220V | AC 200V-240V | 3.5W | | | | |

BD-A

Audible Alarm



AC/DC 24V Only



AC/DC 24V Only

90dB at 1m

4 Channels / 32 Sounds

IP54

□80

NPN
Open-collector



The BD Series can play melodies, chimes and alarms with variable audible control and a compact, but loud speaker.

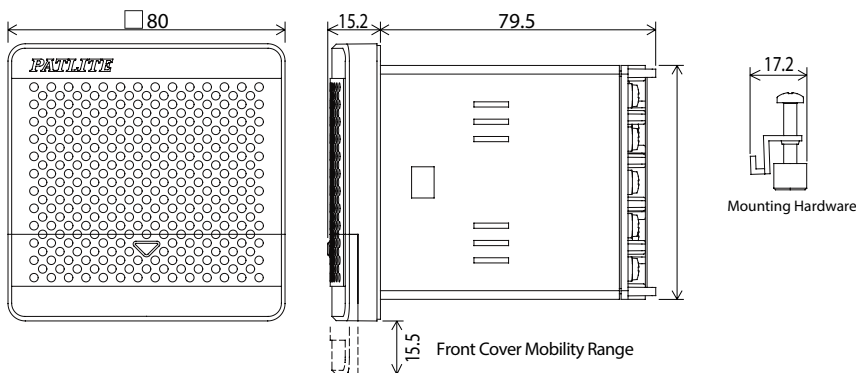
FEATURES

- Maximum output level of 90dB (at 1m) is suitable for use in a noisy factory.
- 32 pre-recorded sounds in one unit to be used for various applications.
- Sound output level and sound group can be selected by rotary switches stored behind the front panel for easier operation, even after installation.
- Select a sound group to playback 4 pre-recorded sounds.
- A new sound group can be created from the 32 sounds by using an optional memory card (sold separately).
- Compliant with the RoHS directive
- Has the CE mark and conforms to the requirements (for 12V/24V type) for the EC directive.
- Is a UL recognized component (File No. E24210).

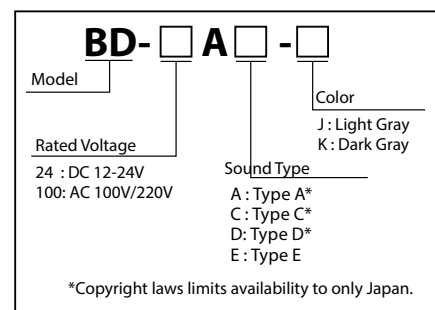
AVAILABLE BY SPECIAL ORDER

- Binary input controlled 15 sound playback model.
- PNP open collector transistor type.

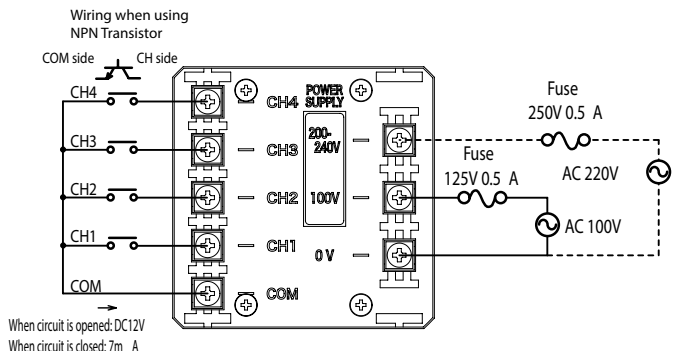
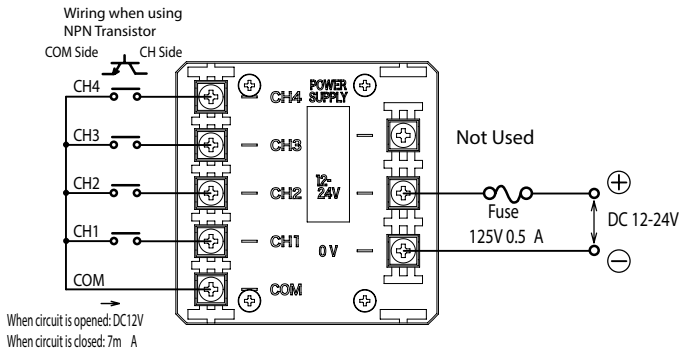
Dimensions (Unit: mm)



How to Order



Wiring



Melody List

| Type A | | (Japan Only) | |
|-------------------------------|------------------------------|--------------------------|-----------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Stutter + Bell | Synthesized Melody | Chime | Call Sign |
| Fur Elise | Maiden's Prayer | Bach Minuet in Gmaj | Annie Laurie |
| London Bridge is falling down | Hol-di-ri-Dia | Mary had a little Lamb | Camptown Races |
| Cuckoo Song | Village Blacksmith | On the Bridge of Avignon | Daydream Believer |
| Amaryllis | Mozart Symphony No. 40 | Quiet Lakeside | Ich bin ein Musikante |
| Spanish Romance | Katyusha | Grandfather's Clock | Ave Maria |

| Type D | | (Japan Only) | |
|-----------------------------------|--------------------------------|--------------------------------|------------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Runner | Mamotte Agetai | Chime | Call Sign |
| Iribiao Kikinagara | September | Doyoubino Koibito | Akino Kehai |
| Saafu Tengoku Sukii Tengoku | Iro White-blend | Happy Birthday | Hi Ho |
| I've been working on the Railroad | The Bear Song | Toys Go "Cha-cha-cha" | Konnako Irukana |
| Schubert's Lullaby | Rudolph the red-nosed Reindeer | She Wore a Yellow Ribbon | My Darling, Clementine |
| Yellow Rose of Texas | Yankee Doodle | When the Saints Go Marching In | Londonderry Air |

| Type C | | (Japan Only) | |
|-------------------------------|------------------------------|-------------------------|------------------------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Synthesized Melody | Synthesized Piano | Synthesized Bell |
| Stutter + Bell | Synthesized Melody Chime | Chime | Call Sign |
| Can't take my eyes off of you | Top of the World | The Entertainer | Amazing Grace |
| Amairono Kamino Otome | Les Champs-Elysees | Canon | Rara Sunshine |
| Uchuusenkan Yamamoto | Oshiete | Makenaide | Gonna Fly Now (Theme from "Rocky") |
| I don't Wanna Miss a Thing | Yozorano Mukou | Aiwa Katsu | Haruyo Koi |
| Gattsudaze | Odoru Ponpokorin | Imasugu Kisu Mi | Truth |

| Type E | | (Worldwide) | |
|------------------------------|--------------------|---------------------|-------------------------------|
| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
| Stutter (rapid intermittent) | Synthesized Melody | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringing Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Galloping Hi-Lo | Ringing Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

Specifications

| Model | BD-24A □ - □ | BD-100A □ - □ |
|-----------------------------|--|---------------------------|
| Rated Voltage | DC 12V - 24V | AC 100V/AC 220V (50/60Hz) |
| Operating Voltage Range | DC 10.8V- 26.4V | AC 100V ±10%/AC 220V ±10% |
| Operating Temperature Range | -20°C - +55°C | |
| Relative Humidity | 85% RH (No Condensation) | |
| Power Consumption | Maximum 4.0W | Maximum 5.5W |
| Volume | Adjustable up to a maximum of 90dB (at 1m) when flushmounted. (Volume may be less, depending on surrounding environment and playback sound) | |
| Input Method | Bit Input | |
| Input Signal Duration | Continuous | |
| Boot-up Time | Input Voltage: 1 sec. or less Channel Signal Input: 170msec or less | |
| Channels | 4 Channels | |
| Recorded Sound | 32 Melodies and Alarm Sounds | |
| Sound Group | 16 Patterns (A to P) | |
| Protection Rating | IP54 (When flush-mounted, Upright direction Only) | |
| Vibration Resistance | 19.6m/s ² | |
| Mass (Tolerance ±10%) | 160g | 180g |

Use of Copyrighted Material
 PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C, and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody charts Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

BK



Audible Alarm



AC/DC 24V Only



AC/DC 24V Only

95dB at 1m

8 Channels / 32 Sounds

IP54

□120

NPN
Open-collector

The BK Series can play melodies, chimes and alarms with variable audible control and a compact but loud speaker.

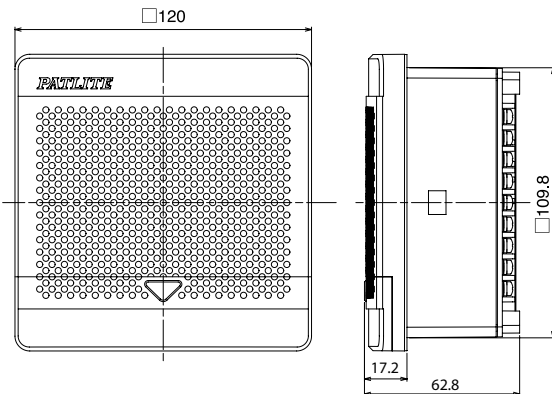
FEATURES

- 32 pre-recorded sounds in one unit to be used for various applications.
- Maximum output level of 95dB (at 1m) is suitable for use in a noisy factory.
- Rotary switch to easily change sound groups and adjust volume output from the front panel, even after installation.
- Use bit input to select a sound group to playback 8 pre-recorded sounds.
- A new sound group can be created from the 32 sounds by using an optional memory card (sold separately).
- Compliant with the RoHS directive
- Has the CE mark and conforms to the requirements (for 12V/24V type) for the EC directive.
- Is a UL recognized component (File No. E24210).

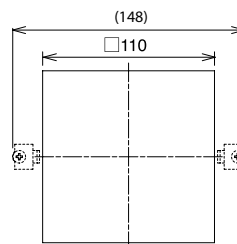
AVAILABLE BY SPECIAL ORDER

- PNP open collector transistor type.

Dimensions (Unit: mm)

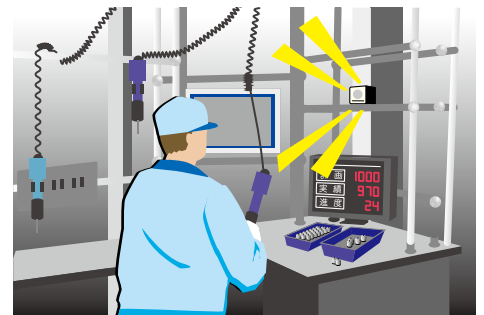


Mounting Dimensions



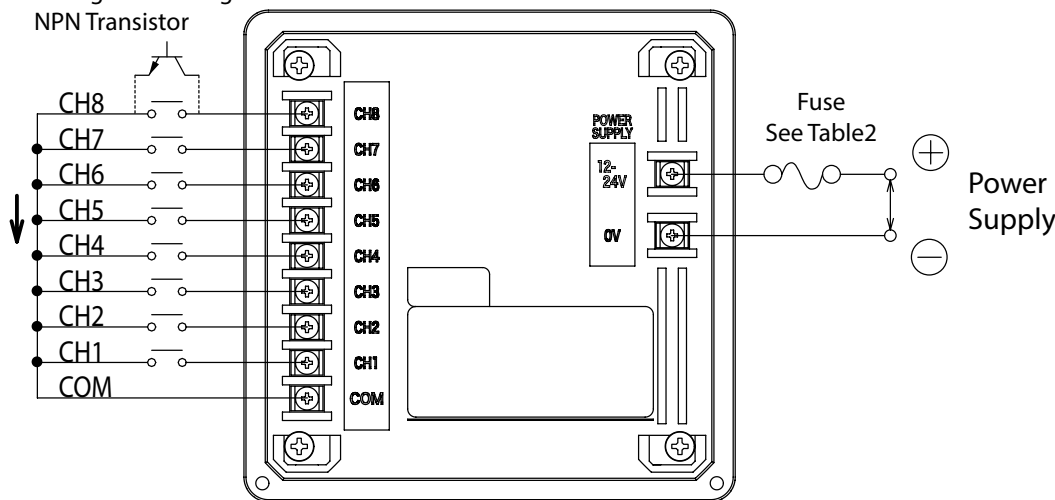
How to Order

| | | |
|--|--|-------------------------------|
| BK-□□-□ | | Color |
| Model | | J: Light Gray K: Dark Gray |
| Rated Voltage | | Sound Type |
| 24 : DC 12-24V | | A : Type A* |
| 100: AC 100V | | C : Type C* |
| 220: AC 220V | | D : Type D* |
| | | E : Type E |
| *Copyright laws limits availability to Japan only. | | |



Wiring

Wiring when using NPN Transistor



Melody List

| Type A | | (Japan Only) | |
|-------------------------------|------------------------------|--------------------------|-----------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Stutter + Bell | Synthesized Melody | Chime | Call Sign |
| Fur Elise | Maiden's Prayer | Bach Minuet in Gmaj | Annie Laurie |
| London Bridge is falling down | Hol-di-ri-Dia | Mary had a little Lamb | Camptown Races |
| Cuckoo Song | Village Blacksmith | On the Bridge of Avignon | Daydream Believer |
| Amaryllis | Mozart Symphony No. 40 | Quiet Lakeside | Ich bin ein Musikante |
| Spanish Romance | Katyusha | Grandfather's Clock | Ave Maria |

| Type D | | (Japan Only) | |
|-----------------------------------|--------------------------------|--------------------------------|------------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Runner | Mamotte Agetai | Chime | Call Sign |
| Iribiao Kikinagara | September | Doyoubino Koibito | Akino Kehai |
| Saafu Tengoku Sukii Tengoku | Iro White-blend | Happy Birthday | Hi Ho |
| I've been working on the Railroad | The Bear Song | Toys Go "Cha-cha-cha" | Konnako Irukana |
| Schubert's Lullaby | Rudolph the red-nosed Reindeer | She Wore a Yellow Ribbon | My Darling, Clementine |
| Yellow Rose of Texas | Yankee Doodle | When the Saints Go Marching In | Londonderry Air |

| Type C | | (Japan Only) | |
|-------------------------------|------------------------------|-------------------------|------------------------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Synthesized Melody | Synthesized Piano | Synthesized Bell |
| Stutter + Bell | Synthesized Melody Chime | Chime | Call Sign |
| Can't take my eyes off of you | Top of the World | The Entertainer | Amazing Grace |
| Amairono Kamino Otome | Les Champs-Elysees | Canon | Rara Sunshine |
| Uchuusenkan Yamamoto | Oshiete | Makenaide | Gonna Fly Now (Theme from "Rocky") |
| I don't Wanna Miss a Thing | Yozorano Mukou | Aiwa Katsu | Haruyo Koi |
| Gattsudaze | Odoru Ponpokorin | Imasugu Kisu Mi | Truth |

| Type E | | (Worldwide) | |
|------------------------------|--------------------|---------------------|-------------------------------|
| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
| Stutter (rapid intermittent) | Synthesized Melody | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringling Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Galloping Hi-Lo | Ringling Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

Specifications

| Model | BK-24 □ | BK-100 □ | BK-220 □ |
|-----------------------------|---|----------------------|-------------------|
| Rated Voltage | DC 12V-24V | AC 100V (50/60Hz) | AC 220V (50/60Hz) |
| Operating Voltage Range | DC 10.8V- 26.4V | AC 100V ±10% | AC 220V ±10% |
| Operating Temperature Range | -20°C - +50°C | | |
| Relative Humidity | 85% RH (No Condensation) | | |
| Power Consumption | Maximum 12W | Maximum 10W | Maximum 11W |
| Volume | Adjustable up to a maximum of 95dB (at 1m) when flushmounted. (Volume may be less, depending on surrounding environment and playback sound) | | |
| Input Method | Bit Input, Binary Input | | |
| Input Signal Duration | Continuous | | |
| Boot-up Time | Input Voltage: 1 sec. or less Channel Signal Input: 170msec or less | | |
| Channels | Bit: 4 Channels; Binary: 32 Channels | | |
| Recorded Sound | 32 Melodies and Alarm Sounds | | |
| Sound Group | 16 Patterns (A to P) | | |
| Protection Rating | IP54 (When flush-mounted, Upright direction Only) | | |
| Vibration Resistance | 45m/s ² | 19.6m/s ² | |
| Mass (Tolerance ±10%) | 350g | 530g | |

Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C, and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody charts Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.



Melody/Alarm Horn



(M3 Not Included)



(12/24V Only)

110dB at 1m

32 Channels (Binary)

IP65

NPN/PNP
Open-collector

Cable



Terminal



Exceptional Sound Quality Field Programmable Melody/Alarm Horn

FEATURES

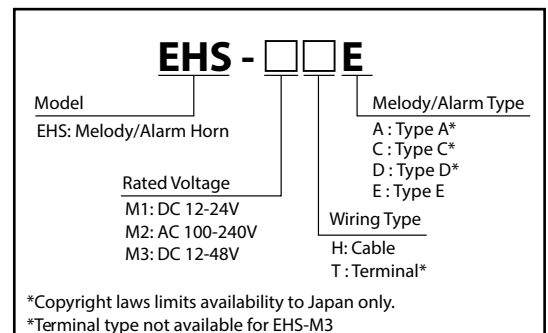
- EHS comes with 32 preloaded melody and alarm sounds with adjustable volume up to 110dB (at 1m).
- Ideal for plant-wide notification, public address and process control.
- Robust, indoor and outdoor use with vibration resistance up to 4.5G.
- Protection Rating of IP65.
- UL464, CSA-C22.2 NO.205-M1983, FCC Part 15 Subpart B Class 4.
- CE, RoHS Compliant (EHS-M1 Only).

EHS vs EHV (Functionality Comparisons)

| Model | Onboard Sounds | MP3 Playback | Playback Modes | No. of Playback Channels |
|-------|----------------|--------------|----------------|------------------------------------|
| EHS | 32 Sounds | No | 1 Mode | 8 ch Bit Input/ 32 ch Binary Input |
| EHV | 63 Sounds | Yes* | 4 Modes | 8 ch Bit Input/ 63 ch Binary Input |

* Internal Memory size of 2 Mbytes, maximum playback of 220 seconds at a 64kbit/sec rate

How to Order



Specifications

EHS

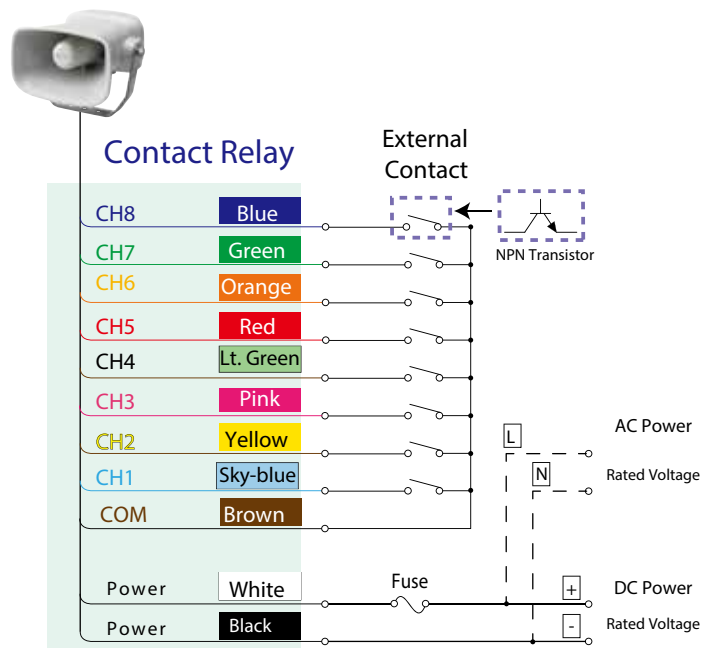
| Model | Rated Voltage | Voltage Range | Power Consumption | Sound Pressure | Operating Temperature Range | No. of Playback Messages | Protection Rating | Wiring Type | Mass |
|----------|---------------|-----------------|---------------------------------------|------------------------------|------------------------------------|----------------------------------|-------------------|----------------|--|
| EHS- M1H | DC 12 - 24V | DC 10.8V to 35V | 5.0W (DC24V NPN, Non-voltage Contact) | Alarm: Max. 110dB (at 1m) | -20°C to +50°C (85% RH or less) | Bit Input: 8 Binary Input: 32 | IP65 | Cable | 1.25kg |
| EHS- M1T | | | 5.9W (DC24V PNP, Voltage Contact) | | | | | Terminal | |
| EHS- M3H | DC 12 - 48V | DC 10V to 60V | 5.1W (DC48V NPN, Non-voltage Contact) | | | | | Cable | 1.15kg |
| EHS- M2H | | | AC 100 - 240V | | | | | AC 90V to 264V | 6.9W (AC240V NPN, Non-voltage Contact) |
| EHS- M2T | Terminal | | | | | | | | |

Notes:

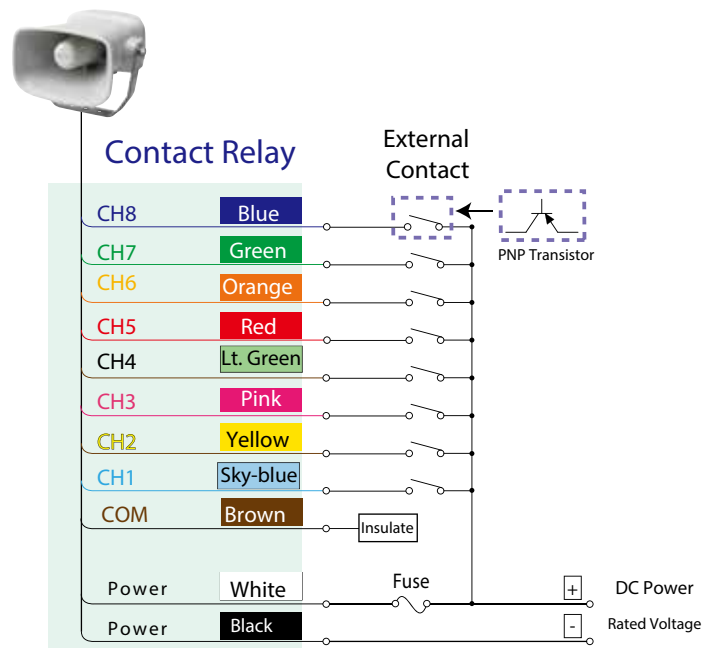
- The sound pressure level is based on measurements under controlled conditions (voice-synthesized 1 kHz sine wave played back from a distance of 1 meter), therefore the surrounding environmental conditions and message content will result in different values for the sound pressure level.
- Even when starting two or more units simultaneously, a lag will occur during message playback.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

Wiring

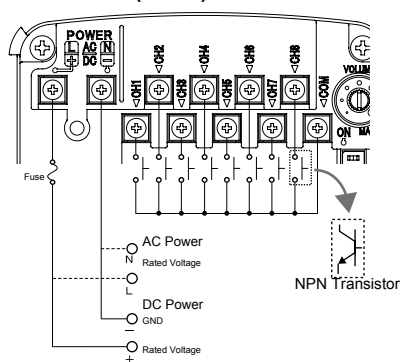
Non-voltage (NPN) Wiring



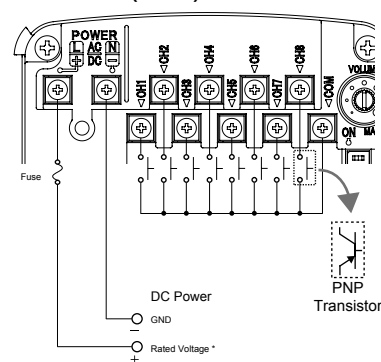
PNP Wiring



Terminal (NPN)



Terminal (PNP)



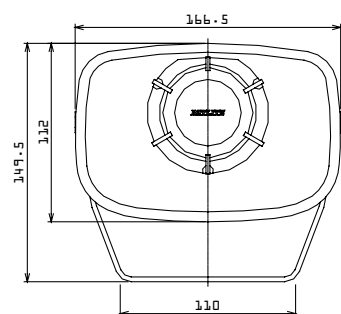
| Transistor Capacity (NPN & PNP) | |
|---------------------------------|-------------------------|
| Current Capacity | $I_c \geq 15\text{mA}$ |
| Current Leakage | $I_L \leq 0.1\text{mA}$ |
| Withstand Voltage | $V_c \geq 35\text{V}$ |
| ON Voltage (V_{sat}) | Less than 1V |

| Recommended Fuse | |
|------------------|----------|
| Rated Voltage | 250V |
| Rated Current | 1A |
| Fuse Type | Standard |

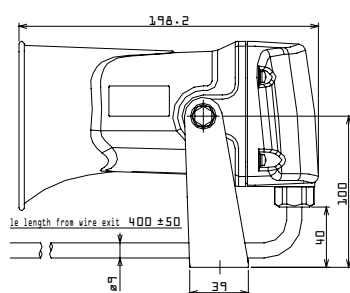
| Maximum Inrush Current | |
|------------------------|-------|
| EH-M1 | 12.5A |
| EH-M2 | 23.0A |
| EH-M3 | 45.0A |

Dimensions (Unit: mm)

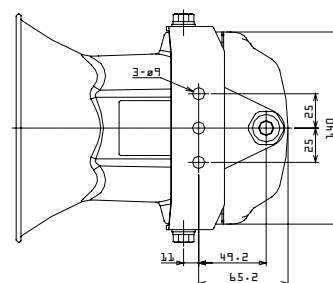
Front View

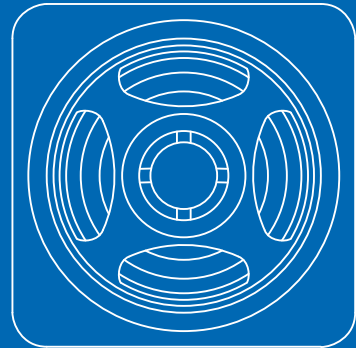


Side View

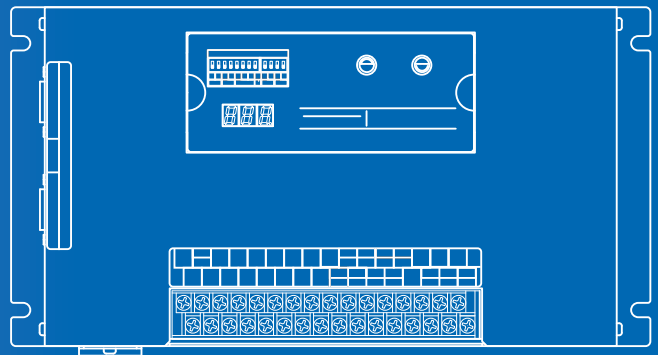


Underside View





Voice & Sound





Model EHV



Model BSV



Model BDV



Model BKV



Model LKEH



Model RFV



Model FV-127JP

STEP 1

Get the New Playlist Editor 2

The Playlist Editor 2 is free from PATLITE. Download the PATLITE Playlist Editor 2 from our Global Home Page, or contact us by E-mail, which can be located on the back of this catalog.

STEP 2

Get the Recommended SD Card (Model SDV-2GP)

The SDV2-GP is an SD Card approved and supplied by PATLITE. (The PATLITE Corporation is a member of the SD Card Association.)

STEP 3

Create the MP3 messages

Convert any message into MP3 data.
(Remove "ID3" tags and be sure the sample rate is the standard rate of 64kb/sec for PATLITE products and the SD Card is formatted for "FAT16".)

STEP 4

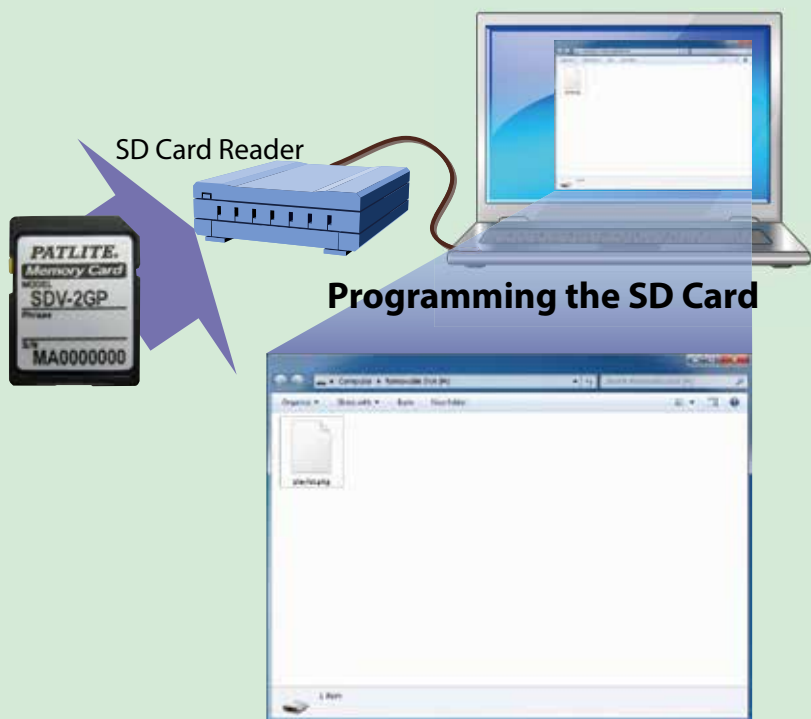
Save the MP3 messages on the SD Card

Use the Playlist Editor 2 to create a playlist and save it on an SD Card. (Refer to the product manual for detailed information)

STEP 5

Load the MP3 Data into the Product

Programming can be done right out in the field!
Insert the SD Card into the Product's SD Card slot and listen for the Beep that tells it's programming (Refer to the product manual for detailed information on programming).



PATLITE Playlist Editor 2

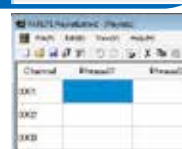
Create any Playlist using Playlist Editor2
With PATLITE's downloadable Playlist Editor2 from the Web, and most Windows OS software;

Playlist Editor 2 Overview

1. Decide on the sounds and messages for Channels and Phrases
2. Start the Software.



1. Insert the sound or message files into appropriate channels and phrases
2. Save as "playlist.slp" after all files are installed
3. The playlist creation is completed.



Get the Necessary Items:

1. An SD Card to save the data onto for rewriting (Recommended Parts : option part SDV-2GP)
 2. Personal Computer with all hardware operating normally.
 3. SD card reader/writer (if one is not built inside the personal computer)
 4. Application Software (PATLITE Playlist Editor 2)
 Corresponding OS: Windows® XP, Windows Vista™ 32 bits/64 bit, Windows® 7 32bit/64 bit, Windows® 8 32bit/64 bit.
- * Writing data onto the SD Card with a computer can be done without the PATLITE Playlist Editor 2, but some functions may be limited. (Refer to the product manual for mor-e details)

Example (EHV)

1. Remove the cover to access the SD Card Slot. (Refer to the product manual for more details)
2. After inserting the SD Card with the stored data into the slot, a high-low beep will sound to indicate rewriting has begun.
3. When a short beep sound is heard, it indicates the rewriting sequence is complete and the SD Card can be removed from the slot.
 * Rewriting should be completed within 60 seconds. The rewriting is not successfully completed if beeping sounds other than indicated above are heard, or when there is no response (Refer to the product manual for more details). In addition, if the volume has been minimized, the beeping sounds cannot be heard.
4. Playback the channels to verify the rewriting has been successful. (Refer to the product manual for more details)

Table: Corresponding Application Software

| Application Software | Usable | Outline |
|---------------------------|--|--|
| PATLITE Playlist Editor 2 | All PATLITE Products | This is a newer version of the PATLITE Playlist Editor. A playlist package can be created and the MP3 data and channel function assignment for the product can be rewritten. |
| FV-Win | Limited PATLITE Products (Products prior to the EHV) | This product is not compatible with the playlist created by FV-Win or the PATLITE Playlist Editor. However, the playlist can be changed into a playlist package using the PATLITE Playlist Editor 2. |
| PATLITE Playlist Editor | | |

Caution

- FV-Win or the PATLITE Playlist Editor can only be used with certain models, but the PATLITE Playlist Editor 2 will work with all PATLITE products.

Please

- It is recommended to use Model SDV-2GP (sold separately). Proper operation is not guaranteed with other SD Cards.
- When inserting the SD Card into the slot, be sure to insert it in the proper direction and do not forcibly insert the card. Failure to comply will result in damage to the SD Card and/or product.
- Avoid the intrusion of any foreign substances from entering the card slot.
- While rewriting the messages, do not disconnect power or remove the SD Card.

Note

- If the SD Card was inserted during message playback, the rewriting procedure will commence soon after the message completes its playback.
- During the message rewrite, any signal inputs on the Audio Input line will be ignored.

BDV

Voice Annunciator



(BDV-15JF Only)

87 dB at 1m

15 Channels (Binary)

63 Seconds

IP54 (Upright Only)

80

NPN
Open-collector

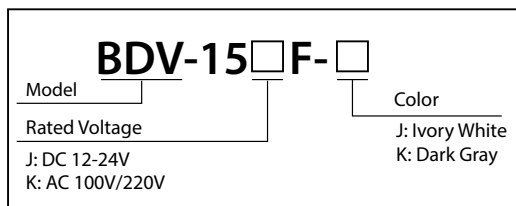


Excellent sound quality with MP3 playback! This panel-mounted MP3 voice annunciator uses SD cards*, allowing messages to be changed easily. (*Recommended: SDV-2GP)

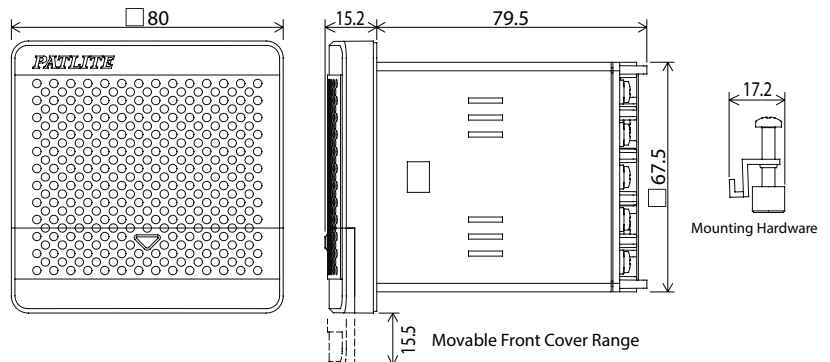
FEATURES

- Only Flush-mounting style available.
- Able to produce a loud sound of up to 87 dB (at 1m) despite its compact size
- A volume control on the front panel provides an easy way to adjust the sound volume.
- The use of an SD card allows message changes without uninstalling the device.
- Environmentally friendly since the unit complies with the EU RoHS Directives.
- Several playback modes are available for various applications.
- Includes binary input as a standard option for selecting up to 15 messages.
- Supports input selection using NPN open-collector transistor.
- The unit complies with EU Directives and includes the CE mark (BDV-15JF only)
- Two colors are available for selecting the best color match for the installation.
- Protection rating: IP54 (only the front panel when flush-mounted)

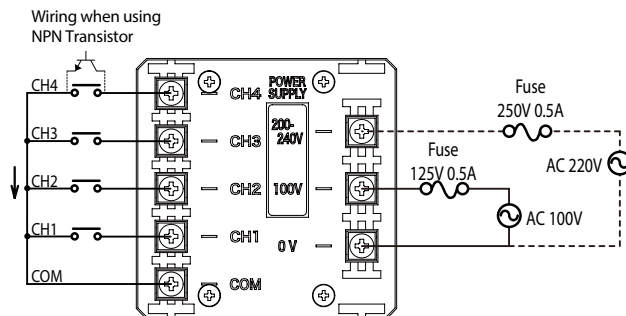
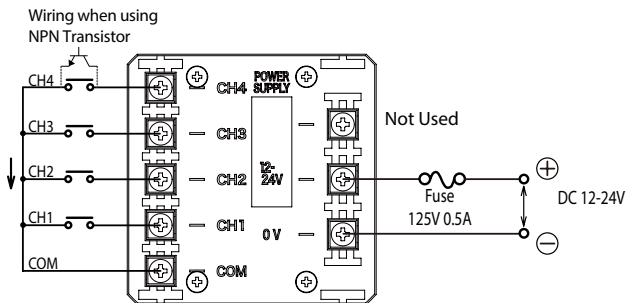
How to Order



Dimensions (Unit: mm)



Wiring Diagram



Playback Modes

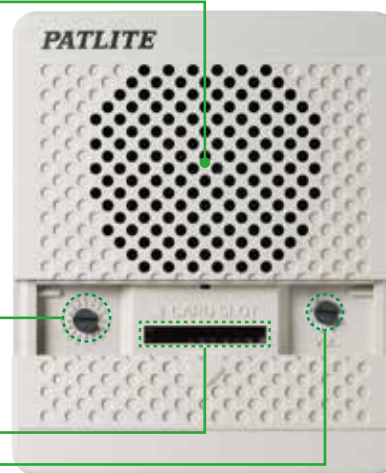
Mode Selector Switch

Several playback modes for a combination of applications.

| | | |
|-------|--|---|
| A | Bit Input Mode | Plays back up to 4 messages using Channels 1 to 4. |
| B | Binary Input Mode | Plays back up to 15 messages using Channels 1 to 4. |
| C | Bit Input/ Volume Reduction Mode | Plays back up to 3 messages using Channels 1 to 3. When Channel 4 receives an input, the volume is reduced by about -10dB. |
| D | Binary Input/ Volume Reduction Mode | Plays back up to 7 messages using Channels 1 to 3. When Channel 4 receives an input, the volume is reduced by about -10dB. |
| E | Bit Input/ Priority Message Playback Mode | Plays back up to 7 messages using Channels 1 to 3. If a message input occurs during playback of another message, the message will stop and allow the input message to play back. |
| F | Binary Input/ Priority Message Playback Mode | Plays back up to 15 messages using Channels 1 to 4. If a message input occurs during playback of another message, the message will stop and allow the input message to play back. |
| G | Bit Input/ Hold Message Playback Mode | Plays back up to 4 messages using Channels 1 to 4. As long as the input is held on, the message is played back, once the input is removed, the message playback stops. |
| H | Binary Input/ Hold Message Playback Mode | Plays back up to 15 messages using Channels 1 to 4. As long as the input is held on, the message is played back, once the input is removed, the message playback stops. |
| I - P | Test Playback Mode | Plays back Message No. 1 |

Up to 87dB (at 1m)

Despite its slim appearance, it is able to produce a maximum of 87dB (at 1m). (Actual sound level will depend on sound type and surrounding operating conditions.)



Volume Control

The volume is easily accessible from the front for adjustment.

Memory Card Slot

With an SD Card, messages can be changed while the unit is still mounted.

Options

PATLITE Playlist Editor 2
(Free Download)

SD Card
(2 GB)
SDV-2GP



(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.

Specifications

| Model | Rated Voltage | Operating Voltage Range | Power Consumption | Sound Level (Max.) | Voice File | Operating Temperature Range | Maximum Playback Time | No. of Playback Inputs | Protection Rating | Mass |
|----------|---------------|-----------------------------|-------------------|--------------------|--|-----------------------------------|-----------------------|------------------------|-----------------------|------|
| BDV-15JF | DC 12-24V | DC 10.8V - 26.4V | 4W | 87dB* (at 1m) | MPEG- Audio Layer (MP3) Standard Bit Rate: 64kb/s Fs=44.1kHz | -10 - +50°C (RH less than 85%) | 63 sec. | Bit: 4 Binary: 15 | IP54 (Panel Mount) | 220g |
| BDV-15KF | AC 100/220V | AC 100V ±10% AC 220V±10% | 5W | | | | | | | 340g |

Notes:

- Actual sound level will depend on sound type and surrounding operating conditions.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

BKV

Voice Annunciator



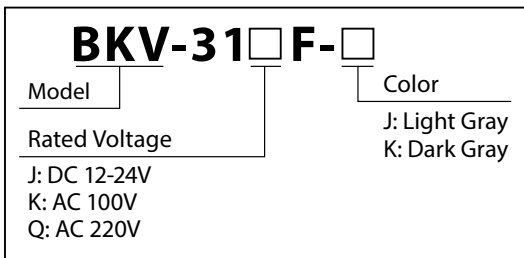
- 95 dB at 1m
- 31 Channels (Binary)
- 63 Seconds
- IP54 (Upright Only)
- 120
- NPN Open-collector

Excellent sound quality with MP3 playback! This panel-mounted MP3 voice annunciator uses SD cards,* allowing messages to be changed easily. (*Recommended: SDV-2GP)

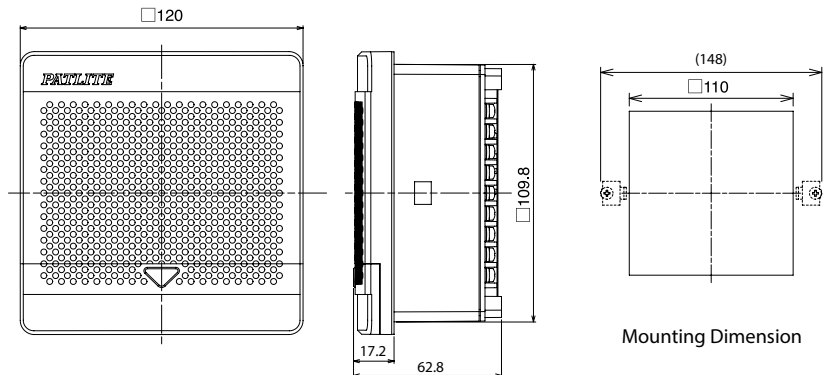
FEATURES:

- Only Flush-mounting style available.
- Able to produce a loud sound of up to 87 dB (at 1m) despite its compact size
- A volume control on the front panel provides an easy way to adjust the sound volume.
- The use of an SD card allows message changes without uninstalling the device.
- Environmentally friendly since the unit complies with the EU RoHS Directives.
- Several playback modes are available for various applications.
- Includes binary input as a standard option for selecting up to 15 messages.
- Supports input selection using NPN open-collector transistor.
- The unit complies with EU Directives and includes the CE mark (BKV-15JF only)
- Two colors are available for selecting the best color match for the installation.
- Protection rating: IP54 (only the front panel when flush-mounted)

How to Order



Dimensions (Unit: mm)



Playback Modes

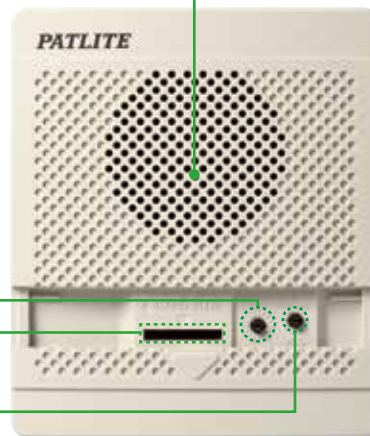
Mode Selector Switch

Several playback modes for a combination of applications.

| | | |
|-------|---|---|
| A | Bit Input Mode | Plays back up to 5 messages using Channels 1 to 5. |
| B | Binary Input Mode | Plays back up to 31 messages using Channels 1 to 5. |
| C | Bit Input/Volume Reduction Mode | Plays back up to 4 messages using Channels 1 to 4. When Channel 5 receives an input, the volume is reduced by about -15dB. |
| D | Binary Input/Volume Reduction Mode | Plays back up to 15 messages using Channels 1 to 4. When Channel 5 receives an input, the volume is reduced by about -15dB. |
| E | Bit Input/Priority Message Playback Mode | Plays back up to 5 messages using Channels 1 to 5. If a message input occurs during playback of another message, the message will stop and allow the input message to play back. |
| F | Binary Input/Priority Message Playback Mode | Plays back up to 31 messages using Channels 1 to 5. If a message input occurs during playback of another message, the message will stop and allow the input message to play back. |
| G | Bit Input/Hold Message Playback Mode | Plays back up to 5 messages using Channels 1 to 5. As long as the input is held on, the message is played back, once the input is removed, the message playback stops. |
| H | Binary Input/Hold Message Playback Mode | Plays back up to 31 messages using Channels 1 to 5. As long as the input is held on, the message is played back, once the input is removed, the message playback stops. |
| I - P | Test Playback Mode | Plays back Message No. 1 |

Up to 95dB (at 1m)

Despite its slim appearance, it is able to produce a maximum of 87dB (at 1m). (Actual sound level will depend on sound type and surrounding operating conditions.)



Volume Control

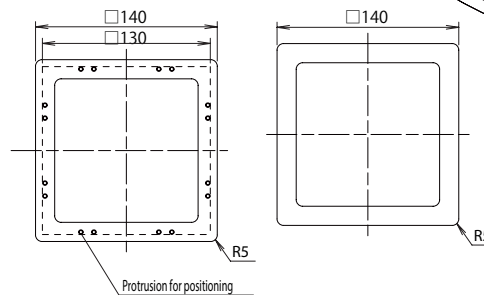
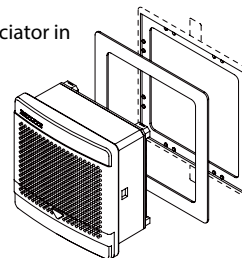
The volume is easily accessible from the front for adjustment.

Memory Card Slot

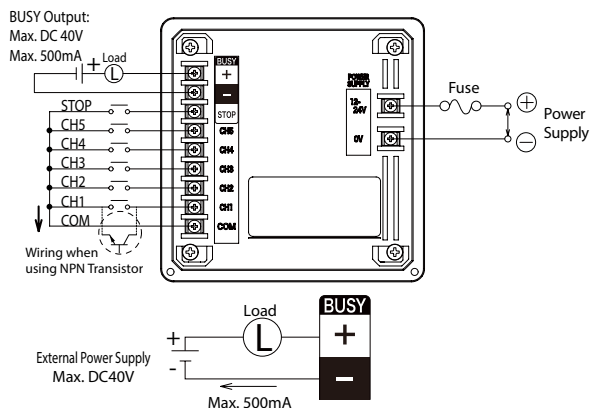
With an SD Card, messages can be changed while the unit is still mounted.

Optional Bracket (BK-001)

This bracket is used to install the annunciator in a place where holes have already been drilled for conventional PATLITE products. (φ133mm Type)



Wiring Diagram



Options

PATLITE Playlist Editor 2 (Free Download)

SD Card (2 GB) SDV-2GP



- (OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)
- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.

Specifications

| Model | Rated Voltage | Operating Voltage Range | Power Consumption | Sound Level (Max.) | Voice File | Operating Temperature Range | Maximum Playback Time | No. of Playback Inputs | Protection Rating | Mass |
|----------|---------------|-------------------------|-------------------|--------------------|--|--------------------------------|-----------------------|------------------------|--------------------|------|
| BKV-31JF | DC 12-24V | DC 10.8V - 26.4V | 9W | 95dB (at 1m) | MPEG- Audio Layer (MP3) Standard Bit Rate: 64kb/s Fs=44.1kHz | -10 - +50°C (RH less than 85%) | 63 sec. | Bit: 5 Binary: 31 | IP54 (Panel Mount) | 350g |
| BKV-31KF | AC 100V | AC 100V ±10% | 10W | | | | | | | 530g |
| BKV-15KF | AC 220V | AC 220V ±10% | | | | | | | | 530g |

Notes: - Actual sound level will depend on sound type and surrounding operating conditions.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

BSV

Voice Annunciator



87 dB at 1m

15 Channels (Binary)

63 Seconds

IP54 (Upright Only)

□75

NPN/PNP
Open-collector



The unbelievably thin design for tighter installations.

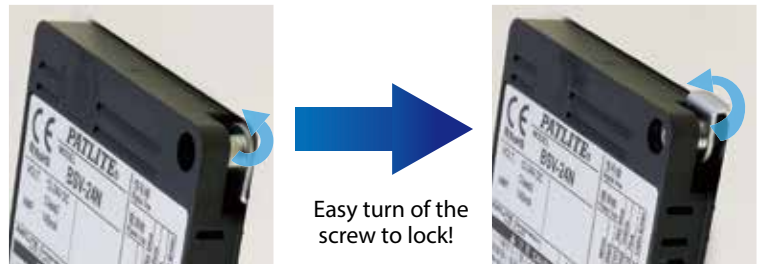
FEATURES

- Sound reduction is made with just one signal input. (Using the sound reduction function reduces the number of playback messages.)
- Diverse operational modes in combination with commands can be setup for the right application.
- The use of the SD card can allow changing messages while out in the field.
- Protection Rating of IP54 (Only for front panel mount attachment).
- Despite the thin shape, it has a maximum output of 87dB (at 1m).
- It complies with Europe's environment-friendly RoHS Directive.
- Can be used with transistor driven inputs. (Either NPN or PNP)
- A compact design with only a thickness of 19.9mm.
- Two installation choices of panel or wall mount.
- The volume control is accessible from the front.
- Listed by Underwriters Laboratories Inc.
- Conforms to the CE requirements.



Easy installation from the front.

With only the need to access the front cover, reduction in labor time and maintenance is simpler with easily removing the front cover for installation and volume adjustment, etc.



With the built-in SD card slot, MP3 data rewriting can be done with an SD card. In addition, rewriting or editing MP3 data files is possible with or without the exclusive PATLITE Playlist Editor 2 Application software.

Options

PATLITE Playlist Editor 2
(Free Download)

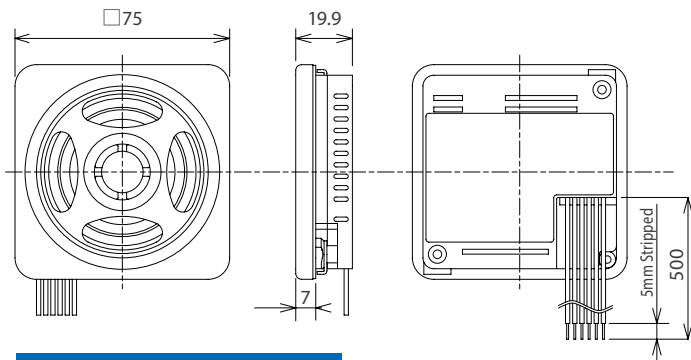
SD Card
(2 GB)
SDV-2GP

(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

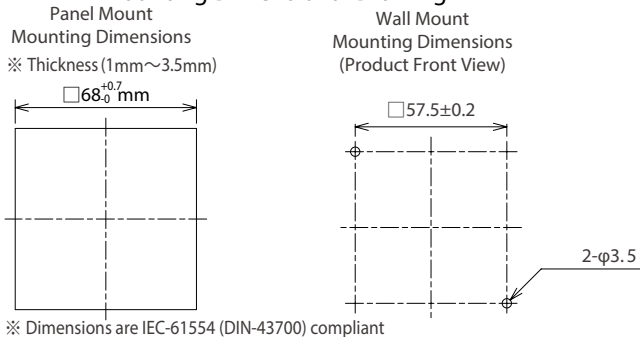
- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.



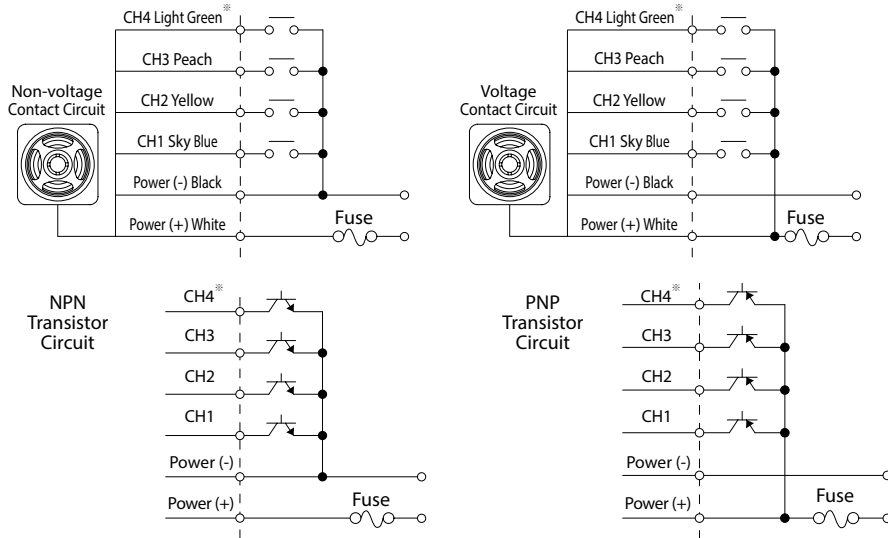
Dimensions (Unit: mm)



Mounting Dimensional Drawing



Wiring



Actual Size

Panel Mount



Wall Mount

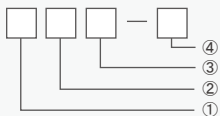


Specifications and How to Order

Specifications

| Model | Transistor Type | Rated Voltage | Operating Voltage Range | Power Consumption | Sound Level | Operating Temperature Range | Max.Playback Time | Playback Channels | Protection Rating | Mass | Front Cover Color | Recorded Data |
|--------------|-----------------|---------------|-------------------------|-------------------|-------------------------------------|---------------------------------|-------------------|--|--|-----------|----------------------------------|---------------|
| BSV-24NM-W/D | NPN Transistor | DC 12-24V | DC10.8V to 26.4V | 3.5W | Max. 87dB (at 1m) 1kHz Sine Wave | -10°C to +50°C (RH 85% or less) | 63sec. | 4 (Bit Input) 15 (Binary Input) ※When using the Sound Reduction Function, the inputs become: 3 (Bit Input) 7 (Binary Input) | IP54 (Only for Panel Mount in the Upright Position) In accordance with IEC 60529 | 100g ±10% | Off white (-W) Dark Gray (-D) | Voice |
| BSV-24NM-S | | | | | | | | | | | Silver (-S) | |
| BSV-24N-W/D | | | | | | | | | | | Off white (-W) Dark Gray (-D) | Alarm |
| BSV-24N-S | | | | | | | | | | | Silver (-S) | |
| BSV-24PM-W/D | PNP Transistor | DC 12-24V | DC10.8V to 26.4V | 3.5W | Max. 87dB (at 1m) 1kHz Sine Wave | -10°C to +50°C (RH 85% or less) | 63sec. | 4 (Bit Input) 15 (Binary Input) ※When using the Sound Reduction Function, the inputs become: 3 (Bit Input) 7 (Binary Input) | IP54 (Only for Panel Mount in the Upright Position) In accordance with IEC 60529 | 100g ±10% | Off white (-W) Dark Gray (-D) | Voice |
| BSV-24PM-S | | | | | | | | | | | Silver (-S) | |
| BSV-24P-W/D | | | | | | | | | | | Off white (-W) Dark Gray (-D) | Alarm |
| BSV-24P-S | | | | | | | | | | | Silver (-S) | |

BSV-24



① Transistor Type
N : NPN Transistor
P : PNP Transistor

② Playback Time
L : 520 sec.
Blank : 63 sec.

③ Registered Messages
Blank : None (15 Alarm Sounds)
M : Pre-recorded Messages

④ Front Cover Color
W : Off white
D : Dark Gray
S : Silver

Notes:

- Actual sound level will depend on sound type and surrounding operating conditions.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing.

□ The method for data rewriting when not using the exclusive application software:

STEP-1 Make a data file with the PC.
※Allocate channel message data (*.mp3) in advance.

STEP-2 Copy the data to the SD Card

STEP-3 Insert the SD Card into the BSV

① Allocate messages for every channel...② Establish the operation mode...③ Control the sound reduction...

When using the exclusive application software, the combination of adjusting the volume of a message or separately making a volume adjustment is possible.

EHV



MP3 Alert/Melody/Alarm Horn



(M3 Not Included)



(12/24V Only)



110dB at 1m

63 Channels (Binary)

IP65

NPN/PNP
Open-collector

Cable



Terminal

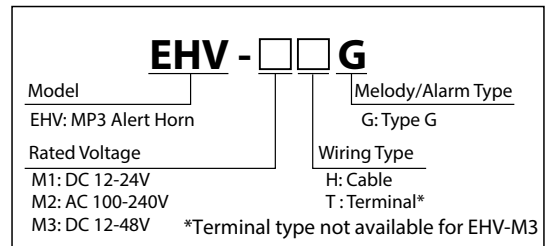


Exceptional Sound Quality Field-programmable MP3 Alarm

FEATURES

- EHV comes with 63 binary channels with adjustable volume up to 110dB (@ 1m).
- EHV offers a field-programmable MP3 function with a maximum of 220 sec. of recording time (@ 64bps), ideal for plant-wide notification and process control.
- Robust, indoor and outdoor use with vibration resistance up to 4.5G, ideal for public address.
- Compliant to UL464 (EHV-M3 Not Included), CSA-C22.2 NO.205-M1983, FCC Part 15 Subpart B Class 4.
- Protection Rating of IP65 and CE (EHV-M2 Not Included), RoHS Compliant.

How to Order



EHS vs EHV (Functionality Comparisons)

| Model | Onboard Sounds | MP3 Playback | Playback Modes | No. of Playback Channels |
|-------|----------------|--------------|----------------|------------------------------------|
| EHS | 32 Sounds | No | 1 Mode | 8 ch Bit Input/ 32 ch Binary Input |
| EHV | 63 Sounds | Yes* | 4 Modes | 8 ch Bit Input/ 63 ch Binary Input |

* Internal Memory size of 2 Mbytes, maximum playback of 220 seconds at a 64kbit/sec rate

4 Playback Modes

Normal Playback

Designated audio message is played back by distinctive signal input. Audio message is played back once in case of one shot input, and audio message is repeated when the signal is input continuously.

Latest Input Priority Playback

When a signal is input during a message playback, the current message playing back will be stopped, and the message of the signal input will be played instead.

Memory Playback

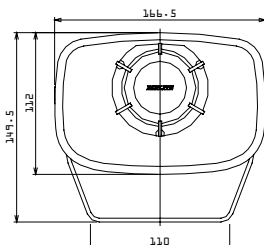
Up to 23 audio message inputs can be memorized in order of input. After one playback is finished, the next memorized audio message will be played back. The inputs exceeding the limit will not be memorized.

Momentary Playback

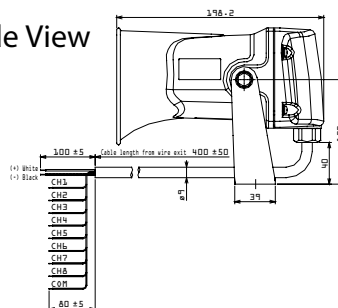
Audio message is played back only while the signal input is maintained. Playback will be stopped when the signal input is stopped.

Dimensions (Unit: mm)

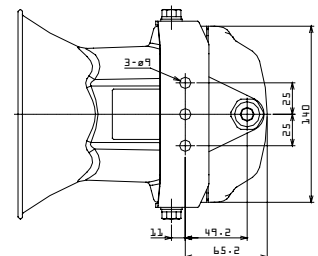
Front View



Side View

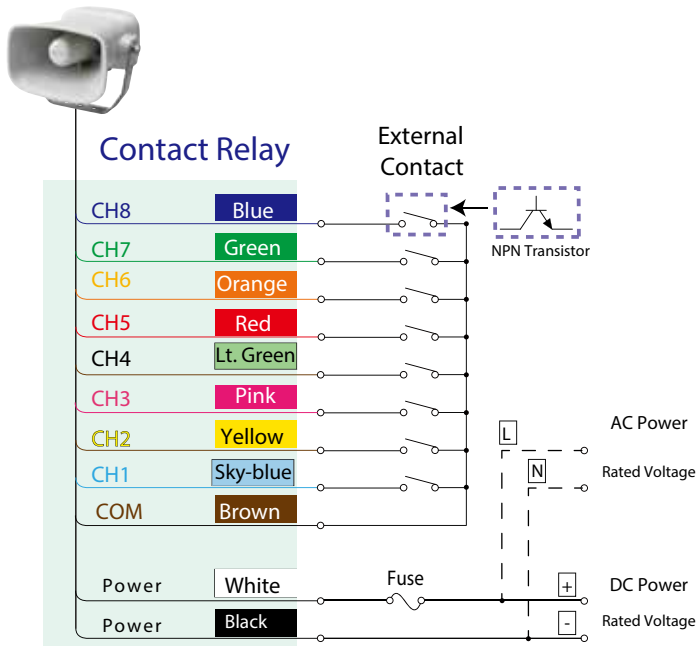


Underside View

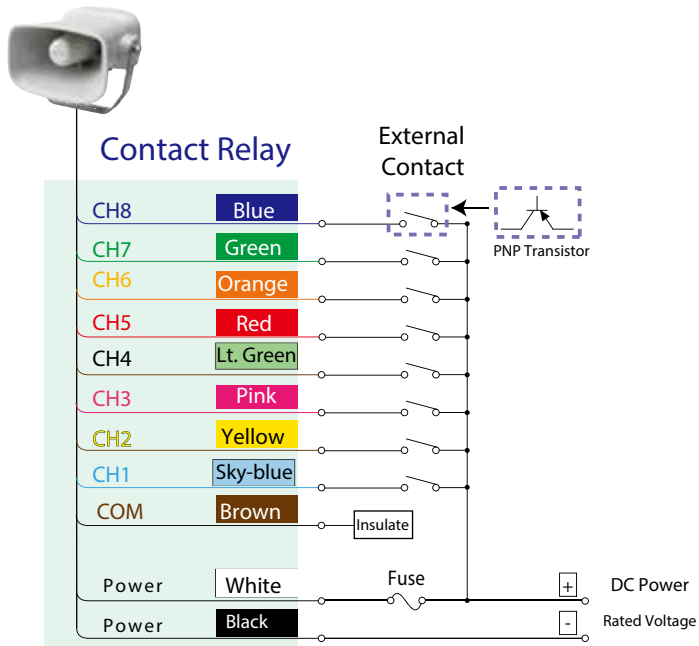


Wiring

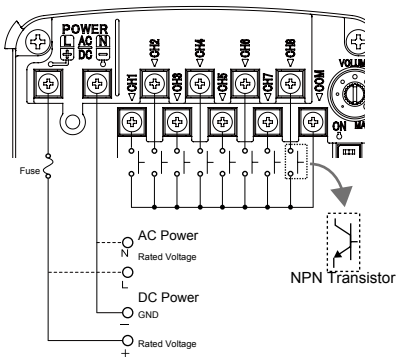
Non-voltage (NPN) Wiring



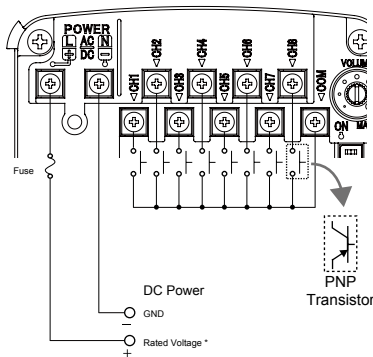
PNP Wiring



Terminal (NPN)



Terminal (PNP)



| Transistor Capacity (NPN & PNP) | |
|---------------------------------|-------------------------|
| Current Capacity | $I_c \geq 15\text{mA}$ |
| Current Leakage | $I_l \leq 0.1\text{mA}$ |
| Withstand Voltage | $V_c \geq 35\text{V}$ |
| ON Voltage (V_{sat}) | Less than 1V |

| Recommended Fuse | |
|------------------|----------|
| Rated Voltage | 250V |
| Rated Current | 1A |
| Fuse Type | Standard |

| Maximum Inrush Current | |
|------------------------|-------|
| EH□-M1 | 12.5A |
| EH□-M2 | 23.0A |
| EH□-M3 | 45.0A |

Specifications

EHV

| Model | Rated Voltage | Voltage Range | Power Consumption | Sound Pressure | Operating Temperature Range | No. of Playback Messages | Protection Rating | Wiring Type | Mass |
|----------|---------------|-------------------|--|------------------------------|------------------------------------|----------------------------------|-------------------|-------------|--------|
| EHV- M1H | DC 12 - 24V | DC 10.8V to 26.4V | 4.0W (DC24V NPN, Non-voltage Contact) 5.0W (DC24V PNP, Voltage Contact) | Alarm: Max. 110dB (at 1m) | -20°C to +50°C (85% RH or less) | Bit Input: 8 Binary Input: 63 | IP65 | Cable | 1.25kg |
| EHV- M1T | | | | | | | | Terminal | |
| EHV- M3H | DC 12 - 48V | DC 10V to 60V | 5.6W (DC48V NPN, Non-voltage Contact) | MP3: Max. 105dB (at 1m) | | | | Cable | 1.15kg |
| EHV- M2H | | | | | | | | Terminal | |
| EHV- M2T | AC 100 - 240V | AC 90V to 264V | 5.3W (AC240V NPN, Non-voltage Contact) | | | | | Cable | 1.25kg |

Notes:

- The sound pressure level is based on measurements under controlled conditions (voice-synthesized 1 kHz sine wave played back from a distance of 1 meter), therefore the surrounding environmental conditions and message content will result in different values for the sound pressure level.
- Even when starting two or more units simultaneously, a lag will occur during message playback.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

Get the Playlist Editor 2 (free from PATLITE)

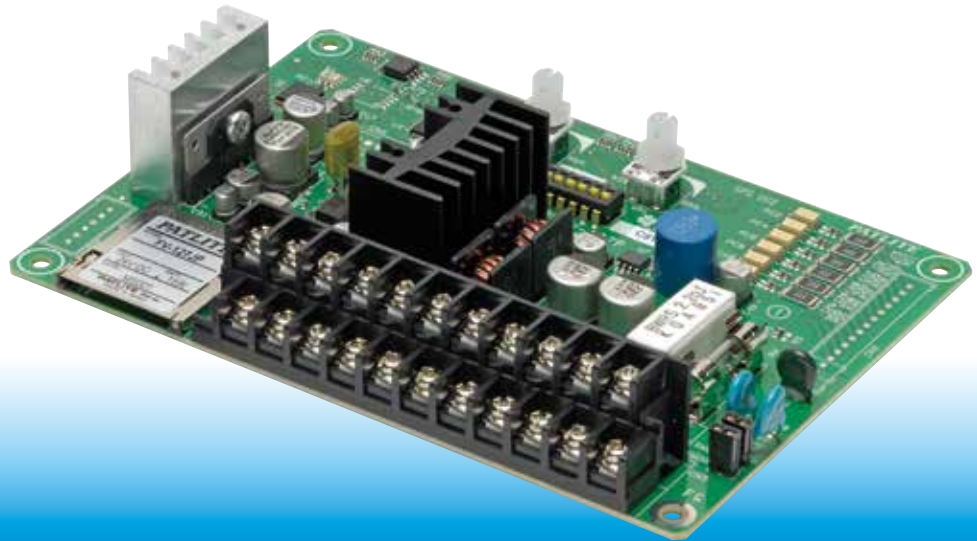
- Contact us by E-mail located on the back of this catalog.
- Convert any message into MP3 data and save it onto an SD Card (with the use of the Playlist Editor 2).
- Insert the SD Card into a PATLITE MP3 product for easy programming.

| Application Software | Usable | Outline |
|---------------------------|--------|--|
| PATLITE Playlist Editor 2 | Yes | This is a newer version of the PATLITE Playlist Editor. A playlist package can be created and the MP3 data and channel function assignment for the product can be rewritten. |
| FV-Win | No | This product is not compatible with the playlist created by FV-Win or the PATLITE Playlist Editor. However, the playlist can be changed into a playlist package using the PATLITE Playlist Editor 2. |
| PATLITE Playlist Editor | No | |

FV-127JP



MP3 File Playback Circuit Board



127 Channels (Binary)

8 Minutes

24VDC

**NPN
Open-collector**

Audio messages can be registered up to 127 channels, ideal for various equipment or facility purpose where the audio message assistance is required.

FEATURES

- High quality sound and long playback time.
- MP3 compressed audio file format enables long playback time and high quality sound.
- Approximately eight minutes worth of audio messages can be stored in the onboard memory.
- Capable of 240 minutes of message playback when using an SD card as external memory. (MP3 data at standard 64kbit/s rate and 128Mb SD Card)
- Audio messages can be overwritten and reprogrammed with the Playlist Editor 2 (free download) and optional SD Card.
- Data stored in the onboard memory can be extracted to the SD Card.
- 3 sound reduction levels of -10dB, -20dB and -30dB (at 1m) can be controlled by an external signal.
- Five different playback modes are available

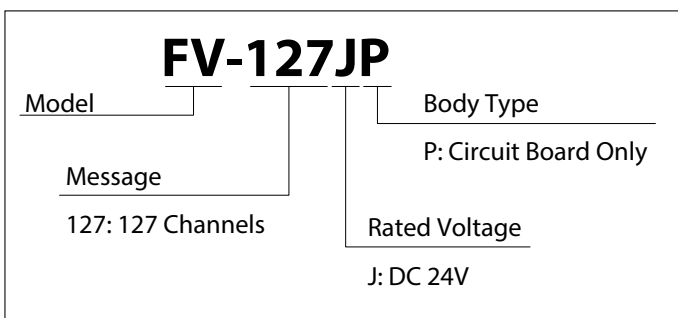
NOISE REDUCTION FEATURES

- Input delay can be selected (10ms or 50ms) to reduce noise
- Extending the delay to input a signal reduces noise
- Another noise countermeasure can include setting jumper pins

OTHER FEATURES

- Terminal block to provide safe and secure wire connections.
- Selectable speaker output (2W or 4W), AUX and BUSY Output terminals.
- Operating voltage range is from 19V to 29V DC (Rated Voltage: 24V DC)
- This product is compliant with the RoHS directive (DIRECTIVE 2002/95/EC)

How to Order



Options

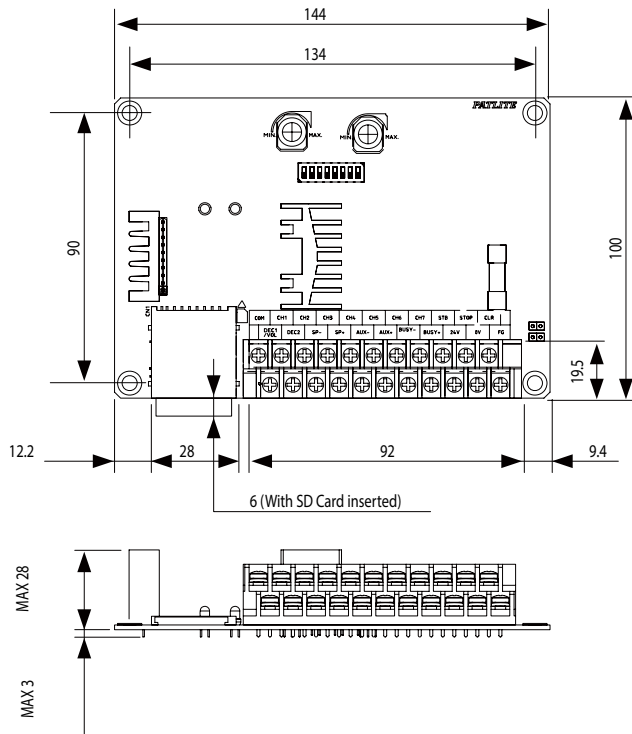
PATLITE Playlist Editor 2
(Free Download)

SD Card
(2 GB)
SDV-2GP

(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.





Normal Playback

Designated audio message is played back by distinctive signal input. Audio message is played back once in case of one shot input, and audio message is repeated when the signal is input continuously.

Memory Playback

Up to 23 audio message inputs can be memorized in order of input. After one playback is finished, the next memorized audio message will be played back. The inputs exceeding the limit will not be memorized.

Latest Input and Greater Channel Priority Playback

When the signal for a greater channel number is input during the message playback, the audio message being played back will be stopped, and previous audio message input will be played back. When the signal for the same or smaller channel number is input, the signal will not be accepted.

Momentary Playback

Audio message is played back only while the signal input is maintained. Playback will be stopped when the signal input is stopped.

Latest Input Priority Playback

When the signal is input during the message playback, the audio message being played back will be stopped, and the previous audio message input will be played back.

Specifications

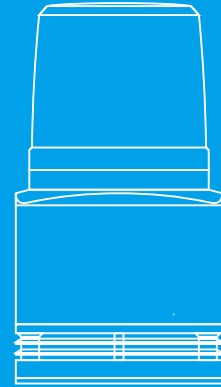
| General Specifications | |
|-------------------------------|--|
| Model Name | FV-127JP |
| Rated Voltage | DC 24V |
| Operating Voltage Range | DC 19 to 29V |
| Wiring Method | M3 Terminal Bus |
| Power Consumption | Maximum 15W (1*) |
| Operating Temperature Range | -10 to 50°C |
| Storage Temperature | -40 to 80°C |
| Relative Humidity | 85% RH or less |
| Operating Environment | Built-in Type Only |
| Installation Method | 4 Screw Tie-down |
| Vibration Resistance | 45m/s ² (30Hz forward and back/Left and right for 2hrs., up and down for 4hrs.) |
| Mass | 160g ±10% |
| Outer Dimensions | 144×100×28 [mm] (Lead Wires and Mounting Posts not included) |
| Audible Specifications | |
| Replay Message Number | For Binary: 127 For Bit Input: 7 |
| Audio File Format | MPEG1-Audio Layer: (MP3) |
| Bit Rate | 32kbit/s; 64kbit/s(Standard); 128kbit/s Fs=44.1kHz |
| Maximum PlaybackTime | On-board Memory (4MB): About 8 min (Recorded with standard bit rate) External Memory (SD Card): With 128MB about 240 min. (Standard Bit Rate Recording) |
| On-board Memory Size | 4,360,191 byte |
| Audio Start-up Time | About 260ms (When sound mute not added at beginning and end of messages) |
| Audio Pause Time | Unless specified, 100ms sound mute added at beginning and end of messages |
| Compatible Memory Card | SD Card Recommended Part No.: SDV-2GP (Sold Separate) |
| Card Format | FAT16 |
| Audio Rewrite Capability | Use with Patlite Playlist Editor 2 (Free Download) and an SD Card |
| Audio Rewrite Time | About 180 sec. (When changing the 4MB on-board memory) |
| Input / Output Specifications | |
| Signal Input Section | CH1, CH2, CH3, CH4, CH5, CH6, CH7, STB, CLR, STOP, DEC1/VOL, DEC2 |
| Signal Input Priority | CLR Input > STOP Input > CH Input (Larger Channel takes Priority) |
| Sound Reduction Input | Speaker/AUX Output: Three Sound Reduction Levels of -10dB, -20dB, -30dB (1*) |
| Input Hold Time | More than 10ms or 50ms (Changeable Settings) |
| Signal Input Type | Non-voltage contact or NPN Open Collector |
| Speaker Output | 8Ω compatible speaker of 4W or more, or 8Ω compatible speaker of 2W or more (Switchable Setting) |
| Maximum SoundPressure | Speaker Output at 4W: 105 dB; at 2W: 102dB (2*) |
| AUX Output | 0dBV 600Ω (Adjustable with Volume Control or Sound Reduction Input) |
| BUSY Output | Maximum DC40V, 500mA |

(1*) 1kHz Sine Wave Data Playback at -6dB

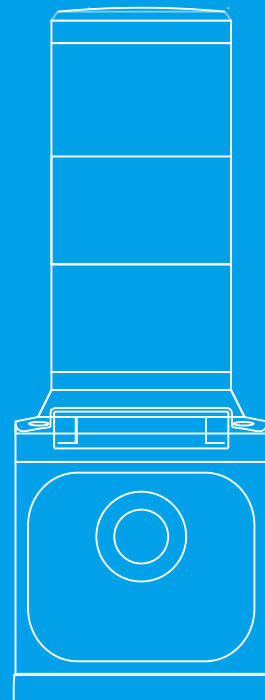
(2*) At 1m with 1kHz Sine Wave Data Playback and SPW-5E Speaker (Sold Separate)

Notes:

- This product complies with the RoHS directive (DIRECTIVE 2002/95/EC)
- Actual sound level will depend on sound type and surrounding operating conditions.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing



Hybrid Products



LKEH



MP3 Voice Annunciator & LED Signal Tower



(24V Only)



(24V Only)

LED



32 Alarm Sounds

105dB at 1m

IP53

(LED) Ø100

NPN
Open-collector



Get the attention you need with the PATLITE field-programmable LKEH Series Hybrid Signal Tower with audible alarm.

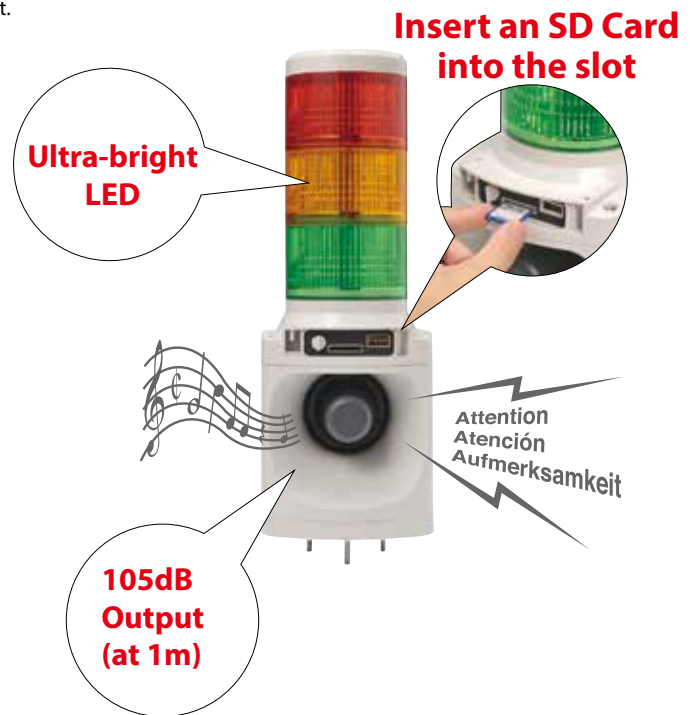
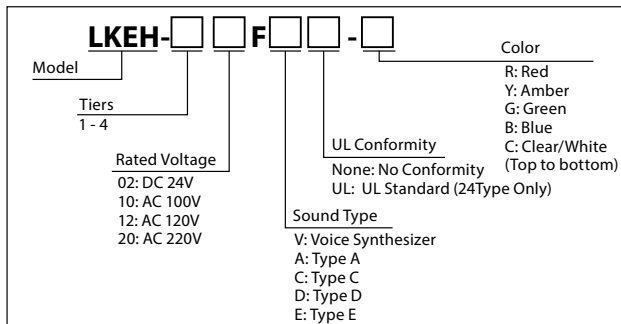
FEATURES

- The pre-recorded type offers 32 sounds in one unit with 8 bit input and 32 binary input channel capability.
- The message capacity for the LKEH-FV is 63 seconds (64kbit/s) with 5 bit input and 31 binary input channel capability.
- The LKEH-FV is field-programmable with an SD Card (sold separately).
- Visible from great distance with ultra-bright LEDs and 100 diameter lens.
- A 2G vibration resistant design allows safe use in a high-vibration environment.
- One common wire makes it easy to control both the audio and LED inputs.
- Volume is adjustable from 0 to 105dB (at 1m) to fit various environments.
- Compliance with the RoHS Directives makes it environmentally friendly.
- Complies with EU directives and includes the CE mark (for 24V type).

AVAILABLE BY SPECIAL ORDER

- PNP open collector transistor type.
- AC 120V type
- UL Listed (File No. E215660, for 24V type only).

How to Order



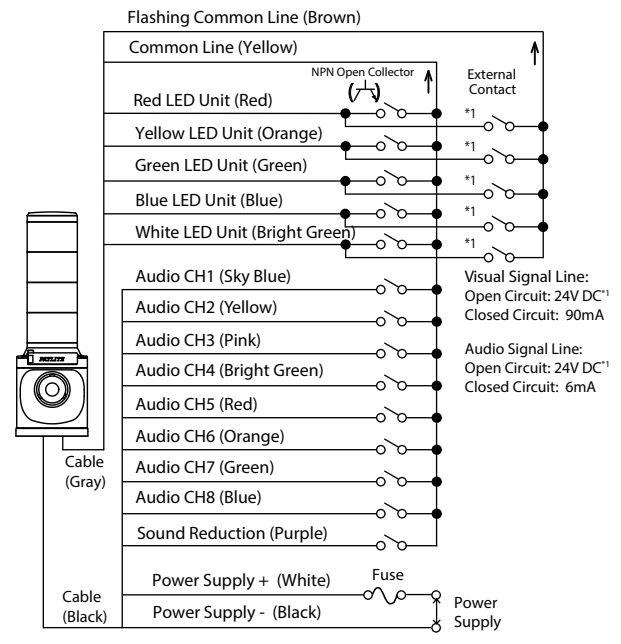
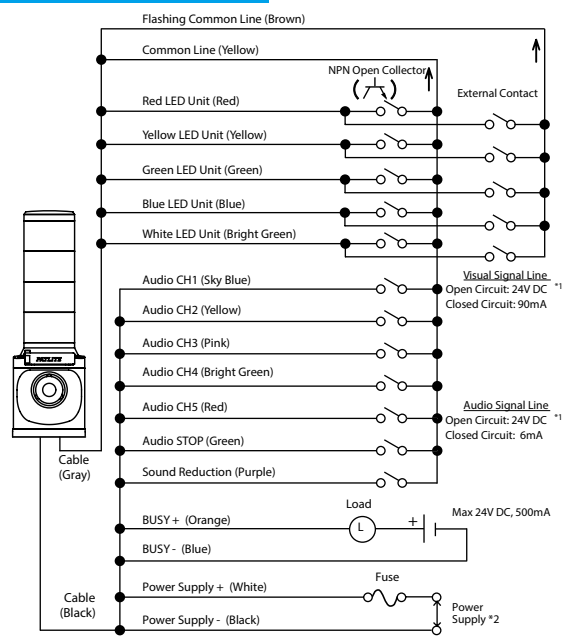
Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody chart Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

Sound Charts

Refer to Page 201 for "Melody Charts".

Wiring



Options

Wall-mount Bracket SZ-023
 Bracket Material: Steel
 Cover Material: ABS Resin



Options

PATLITE Playlist Editor 2 (Free Download)

SD Card (2 GB) SDV-2GP

(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.

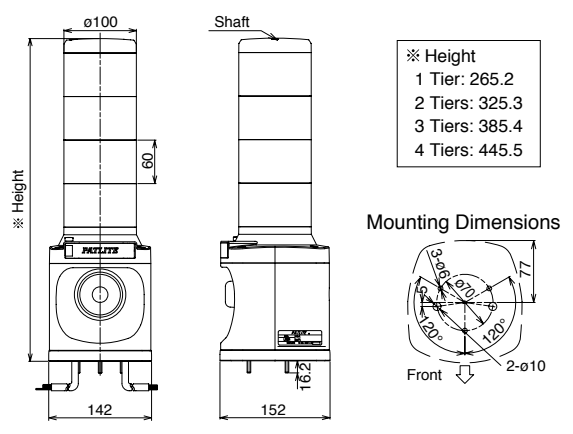
Specifications

| Model | Rated Voltage | Operating Voltage Range | Number of Tiers | Power Consumption | Mass |
|------------|---------------|-------------------------|-----------------|-------------------|-------|
| LKEH- 102F | DC 24V | DC 24V ±10% | 1 | 10.6W | 1.4kg |
| LKEH- 202F | | | 2 | 12.4W | 1.6kg |
| LKEH- 302F | | | 3 | 14.2W | 1.8kg |
| LKEH- 402F | | | 4 | 16.0W | 2.0kg |
| LKEH- 110F | AC 100V | AC 100V ±10% | 1 | 17.0W | 2.1kg |
| LKEH- 210F | | | 2 | 20.0W | 2.3kg |
| LKEH- 310F | | | 3 | 23.0W | 2.5kg |
| LKEH- 410F | | | 4 | 26.0W | 2.7kg |
| LKEH- 112F | AC 120V | AC 120V ±10% | 1 | 17.0W | 2.1kg |
| LKEH- 212F | | | 2 | 20.0W | 2.3kg |
| LKEH- 312F | | | 3 | 23.0W | 2.5kg |
| LKEH- 412F | | | 4 | 26.0W | 2.7kg |
| LKEH- 120F | AC 220V | AC 220V ±10% | 1 | 17.0W | 2.1kg |
| LKEH- 220F | | | 2 | 20.0W | 2.3kg |
| LKEH- 320F | | | 3 | 23.0W | 2.5kg |
| LKEH- 420F | | | 4 | 26.0W | 2.7kg |

Notes:

- The sound pressure level is based on measurements under controlled conditions (voice-synthesized 1 kHz sine wave played back from a distance of 1 meter), therefore the surrounding environmental conditions and message content will result in different values for the sound pressure level.
- Even when starting two or more units simultaneously, a lag will occur during message playback.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

Dimensions (Unit: mm)



RFT



Audible Alarm & LED Tower


LED

90dB at 1m
32 Alarm Sounds
IP54
115
**NPN
Open-collector**


An LED Rotating Light with built-in alarm sounds controllable by binary or bit input for a maximum of 32 sounds!

FEATURES

- Sound reduction feature to drop the volume by about 10dB (at 1m) when an input signal is received (Binary Mode only).
- Using an SD Card can allow customization of one sound group to be re-arranged using any of the pre-installed sounds.
- Compliance with the RoHS Directives makes it environmentally friendly.
- Complies with EU directives and includes the CE mark (for 24V type).
- Can be controlled with NPN open-collector transistor inputs.
- A side panel access allows easier volume adjustment.
- Produces a loud sound of up to 90dB (at 1m)

How to Order

| | | |
|-----------------|------------|-------------|
| RFT-24A- | | □ |
| Rated Voltage | | Globe Color |
| 24: DC 24V | | R: Red |
| 100: AC 100V | | Y: Amber |
| 220: AC 220V | | G: Green |
| | Sound Type | B: Blue |
| | A: A Type | |
| | C: C Type | |
| | D: D Type | |
| | E: E Type | |

Sound Chart

| Type E | | | (Worldwide) |
|------------------------------|--------------------|---------------------|-------------------------------|
| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
| Stutter (rapid intermittent) | Synthesized Melody | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringin' Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Galloping Hi-Lo | Ringin' Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

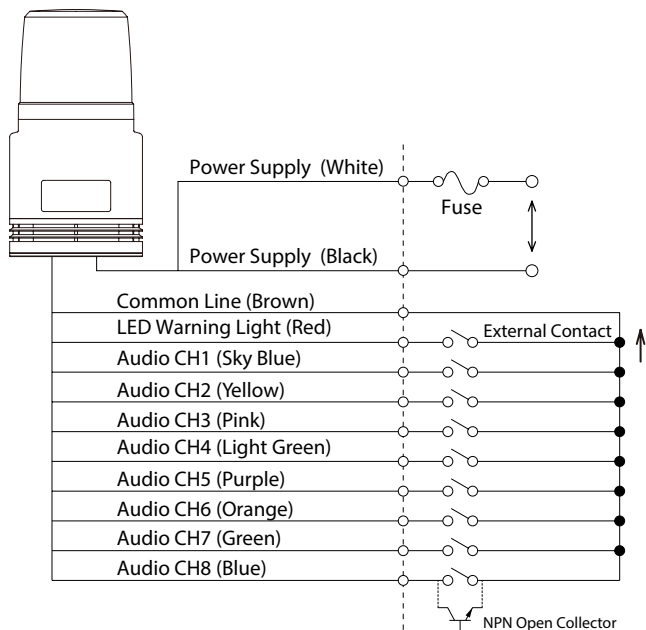
Specifications

| Series | Model | Rated Voltage | Operating Voltage Range | Maximum Power Consumption | Sound Level | Operating Temperature Range | Flashes per Minute | Protection Rating | Vibration Resistance | Mass |
|--------|---------|---------------|-------------------------|---------------------------|-------------------|-------------------------------|--------------------|---------------------------|----------------------|-------|
| RFT | RFT-24 | DC 24V | DC 24V ±10% | 12 W | Max. 90dB (at 1m) | -10°C - +50°C (85%RH or less) | 115 ±15 | IP54 (When Flush-mounted) | 19.6m/s ² | 1.0kg |
| | RFT-100 | AC 100V | AC 100V ±10% | 13 W | | | | | | 1.2kg |
| | RFT-220 | AC 220V | AC 220V ±10% | 13 W | | | | | | 1.2kg |

Notes:

- Actual sound level will depend on sound type and operating conditions.
- Even when starting two or more units simultaneously, a lag will occur during message playback.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

Wiring



Options

RF-001: Wall Mount Bracket



RF-002 Ceiling Mount Bracket



Options

PATLITE Playlist Editor 2
(Free Download)

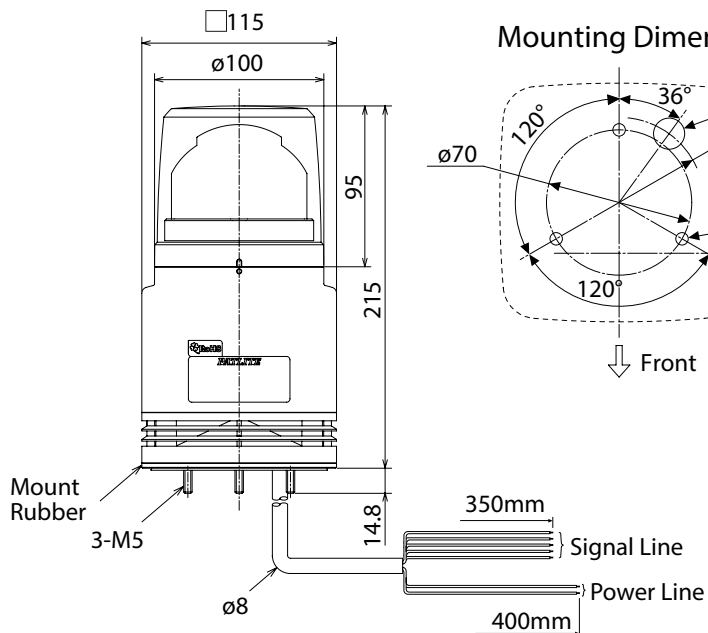
SD Card
(2 GB)
SDV-2GP



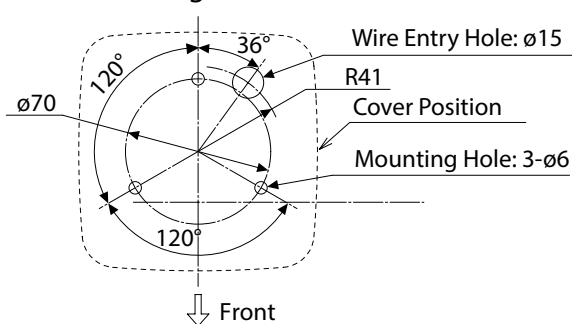
(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.

Dimensions (Unit: mm)



Mounting Dimensions



Side access design enables easy post-installation maintenance



The sound reduction function reduces the volume by approx. -15dB (at 1m), a feature ideal for use at night time together with a timer or sensor.

Sound Reduction



RFV



MP3 Voice Annunciator & LED Signal Tower

LED

15 Channels (Binary)

95dB at 1m

IP54
 115
NPN/PNP
Open-collector


The RFV series is a combination of LED rotating beacon light and MP3 programmable sound unit.

FEATURES

- Field-programmable with an SD Card (sold separately).
- Message capacity of 63 seconds (64kbit/s) with bit input of 4 channels and 15 channels by binary input.
- Volume is adjustable from 0 to 95dB (at 1m) to fit various environments.
- A 4.5G vibration resistant design allows safe use in a high-vibration environment.
- Other Unique Features:
 1. Maintenance reduced with long service ultra-bright LEDs that can last over 5 years with 24/7 continuous operation.
 2. Highly-visible with a special optical reflector design.
 3. Special gear-driven mechanism provides reliability, even after 10 years of no operation.
 4. Tight-locking dome stays on, even in high vibration environments.
 5. Designed for inverted installation.

AVAILABLE BY SPECIAL ORDER

- PNP open collector transistor type.

How to Order

RFV-24F-

Rated Voltage

Globe Color

 24: 24V DC
 100: 100V AC
 220: 220V AC

 R : Red
 Y : Amber
 G : Green
 B : Blue

Options

PATLITE Playlist Editor 2
(Free Download)

SD Card
(2 GB)
SDV-2GP


(OS: Windows® 2000/XP/Vista/Windows 7/Windows 8)

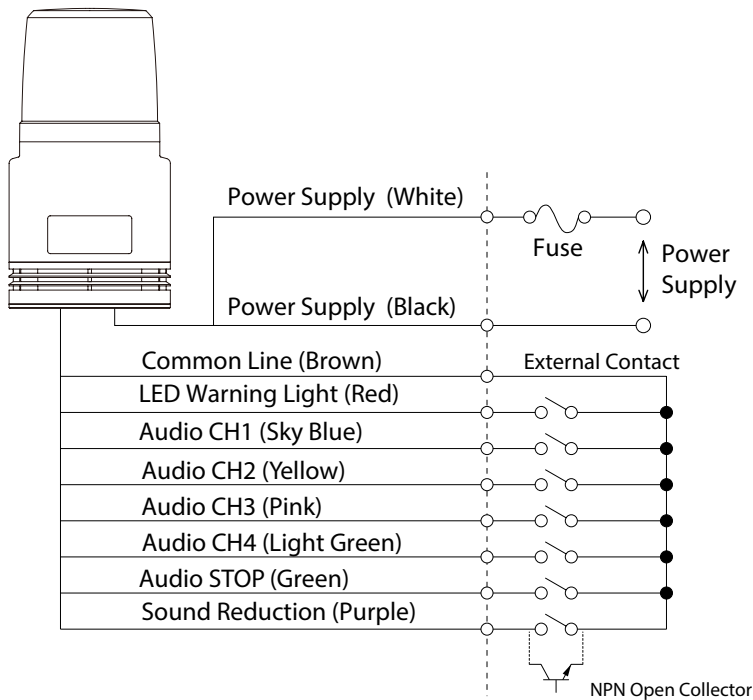
- > The new PATLITE Playlist Editor 2 is required to change the audio message data for this product.
- > The SD Card does not contain any data.

Specifications

| Series | Model | Rated Voltage | Operating Voltage Range | Maximum Power Consumption | Sound Level | Operating Temperature Range | Flashes per Minute | Protection Rating | Vibration Resistance | Mass |
|--------|---------|---------------|-------------------------|---------------------------|----------------------|----------------------------------|--------------------|------------------------------|----------------------|-------|
| RFV | RFV-24 | DC 24V | DC 24V ±10% | 18 W | Max. 95dB (at 1m) | -10°C - +50°C (85%RH or less) | 115 ±15 | IP54 (When Flush-mounted) | 19.6m/s ² | 1.0kg |
| | RFV-100 | AC 100V | AC 100V ±10% | 16W | | | | | | 1.2kg |
| | RFV-220 | AC 220V | AC 220V ±10% | | | | | | | 1.2kg |

- Notes:
- Actual sound level will depend on sound type and operating conditions.
 - Even when starting two or more units simultaneously, a lag will occur during message playback.
 - MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

Wiring



Options

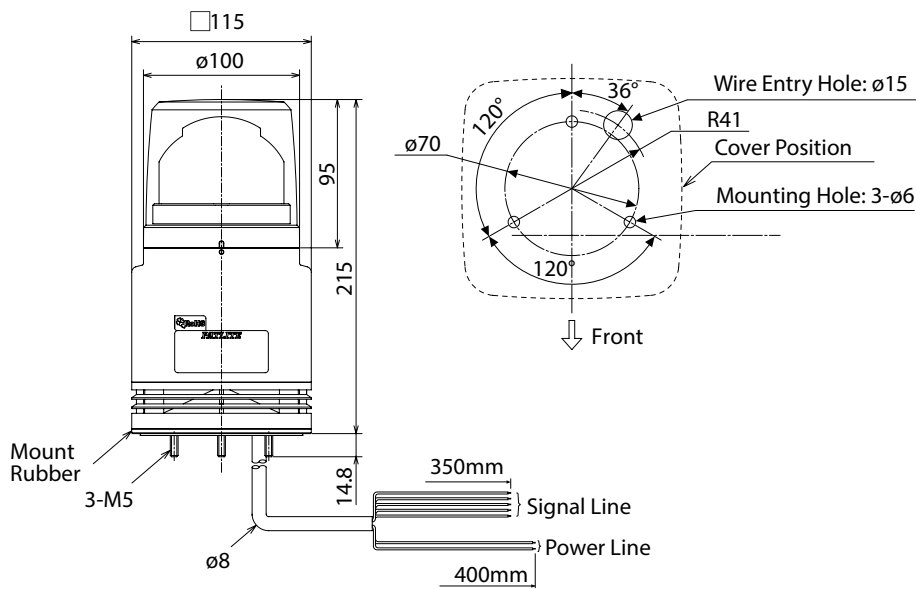
RF-001: Wall Mount Bracket



RF-002 Ceiling Mount Bracket



Dimensions (Unit: mm)



Voice message is field programmable with an SD card (sold separately), and the volume can be easily accessed from the side panel, even after installation.



The sound reduction function reduces the volume by approx. -15dB (at 1m), a feature ideal for use at night time together with a timer or sensor.



Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody chart Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

RT

Hybrid MP3 & Revolving Light



CE (24V Only)

- Bulb**
- 32 Alarm Sounds**
- 105dB at 1m**
- 63 Seconds**
- IP23**
- NPN Open-collector**



Large horn with revolving warning light featuring clear sound up to 105dB (at 1m).

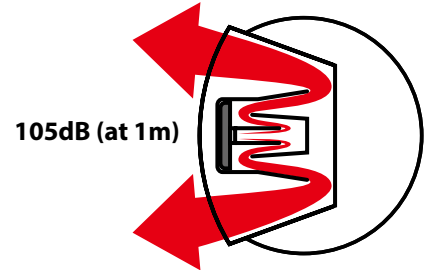
FEATURES

- Built-in Adjustable alarm with a sound of up to 105dB (at 1m).
- High sound quality with the MP3 voice synthesizer (RT-VF only).
- Installation is in the upright position only.
- Dome is made of superior weather-resistant and light-translucent acrylic resin.
- Available colors are Red, Amber, Green, and Blue.
- Complies with EU directives and includes the CE mark (for 24V type).

AVAILABLE BY SPECIAL ORDER

- Cable: Versatile and flexible 3m cable
- AC 120V type
- IP65 rating
- UL Conformity

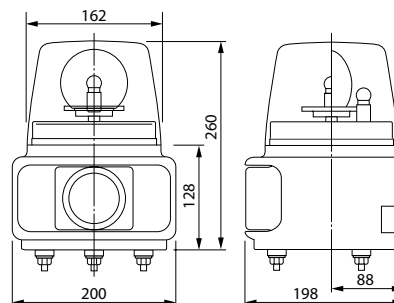
Horn Configuration Concept



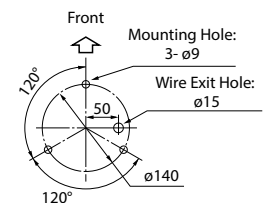
How to Order

| | | |
|--|-----------------------|----------|
| RT-24 <input type="checkbox"/> - <input type="checkbox"/> | | Color |
| Rated Voltage | Sound | R: Red |
| 24 : DC 24V | VF: Voice Synthesizer | Y: Amber |
| 100: AC 100V | A: Type A | G: Green |
| 200: AC 200V | C: Type C | B: Blue |
| | D: Type D | |
| | E: Type E | |

Dimensions (Unit: mm)

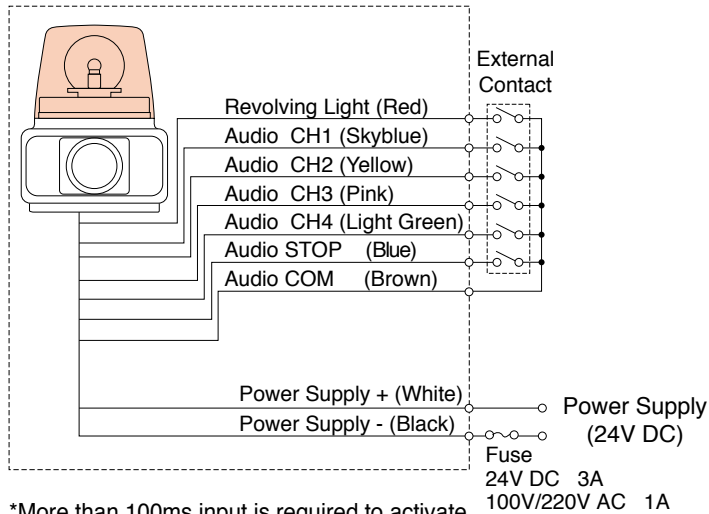


Mounting Dimensions



Wiring

RT-VF



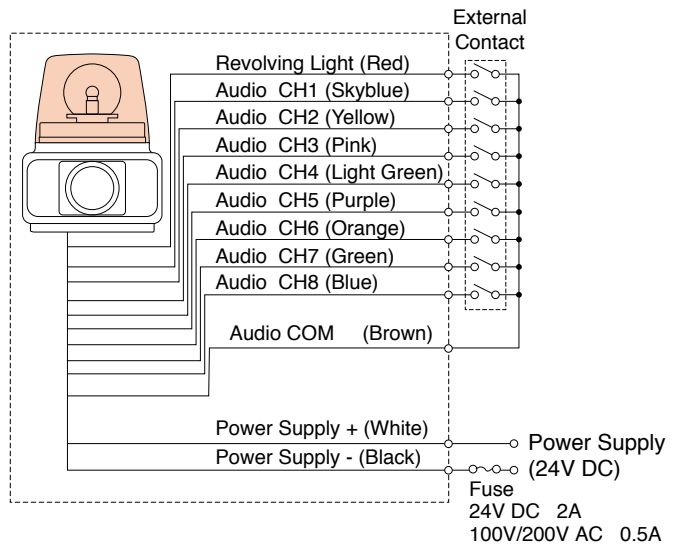
*More than 100ms input is required to activate.

Channel Priority:

4 (Light Green) -> 3 (Pink) -> 2 (Yellow) -> 1 (Skyblue)

The greater number has priority when any of the channels are activated simultaneously.

RT-A/C/D/E



Channel Priority:

8 (Blue) -> 7 (Green) -> 6 (Orange) -> 5 (Red) -> 4 (Light Green) -> 3 (Pink) -> 2 (Yellow) -> 1 (Skyblue)

The greater number has priority when any of the channels are activated simultaneously.

Specifications

| Series | Model | Rated Voltage | Operating Voltage Range | Power Consumption | Bulb | | Sound Level | Operating Temperature Range | Rotations per Minute | Sound Level | Channel Input | Mass |
|--------|----------|---------------|-------------------------|-------------------|---------|-----------|-------------------|-------------------------------|----------------------|--------------------|----------------------|-------|
| | | | | | Ratings | Repl. No. | | | | | | |
| Voice | RT-24VF | DC 24V | DC 21 - 27V | 24 W | 24V 20W | 55 | Max. 90dB (at 1m) | -10°C - +50°C (85%RH or less) | 115 | Max. 105dB (at 1m) | Bit: 4 Binary: 15 | 2.0kg |
| | RT-100VF | AC 100V | AC 90 - 100V | 32 W | 12V 15W | 54 | | | 105 | | | 2.4kg |
| | RT-220VF | AC 220V | AC180 - 240V | 30 W | | | | | 95 | | | 2.0kg |
| Sound | RT-24□ | DC 24V | DC 21 - 27V | 24 W | 24V 20W | 55 | Max. 95dB (at 1m) | -10°C - +50°C (85%RH or less) | 115 | Max. 105dB (at 1m) | Bit: 8 Binary: 32 | 2.0kg |
| | RT-100□ | AC 100V | AC 90 - 100V | 32 W | 12V 15W | 54 | | | 105 | | | 2.5kg |
| | RT-220□ | AC 220V | AC180 - 240V | 30 W | | | | | 95 | | | 2.5kg |

- Notes:
- Actual sound level will depend on sound type and operating conditions.
 - Even when starting two or more units simultaneously, a lag will occur during message playback.
 - MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing

Sound Chart

| Type E (Worldwide) | | | |
|------------------------------|--------------------|---------------------|-------------------------------|
| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
| Stutter (rapid intermittent) | Synthesized Melody | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringing Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Galloping Hi-Lo | Ringing Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody chart Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

KJT



Melody/Alarm & LED Tower

Bulb



8 Channels (Bit)

95dB at 1m

IP23

116

NPN
Open-collector



Multi-tiered Revolving Warning Light integrated with voice synthesizer or melody alarm for various applications.

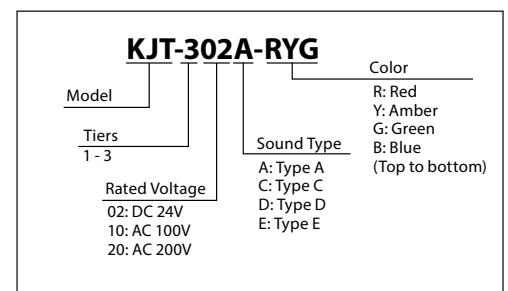
FEATURES

- Eight Channels for Bit Input. (Binary Input: 32)
- Lens is made of superior weather-resistant and light-translucent acrylic resin.
- Built-in adjustable sound of up to 95dB (at 1m) with volume control.
- Warning lights and alarms can be controlled together or separately.
- Available Colors are in Red, Amber, Green, and Blue.
- Installation is available in the upright position only.

Sound Chart

| Type E | | | |
|------------------------------|------------------|---------------------|-------------------------------|
| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
| Stutter (rapid intermittent) | Melody Chime | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringing Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Galloping Hi-Lo | Ringing Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

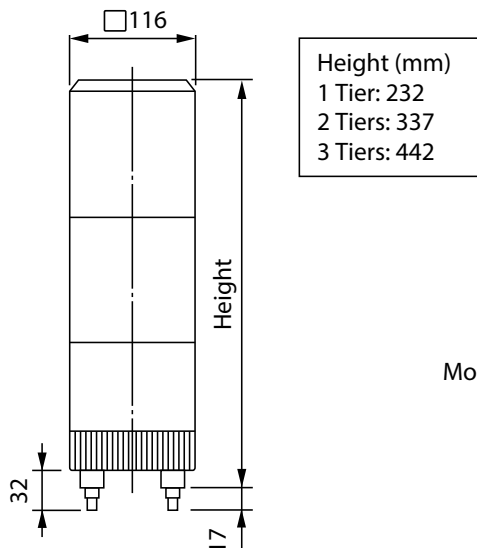
How to Order



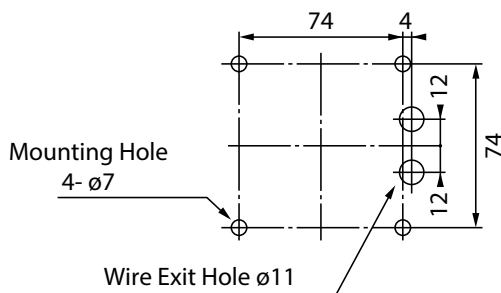
Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody chart Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

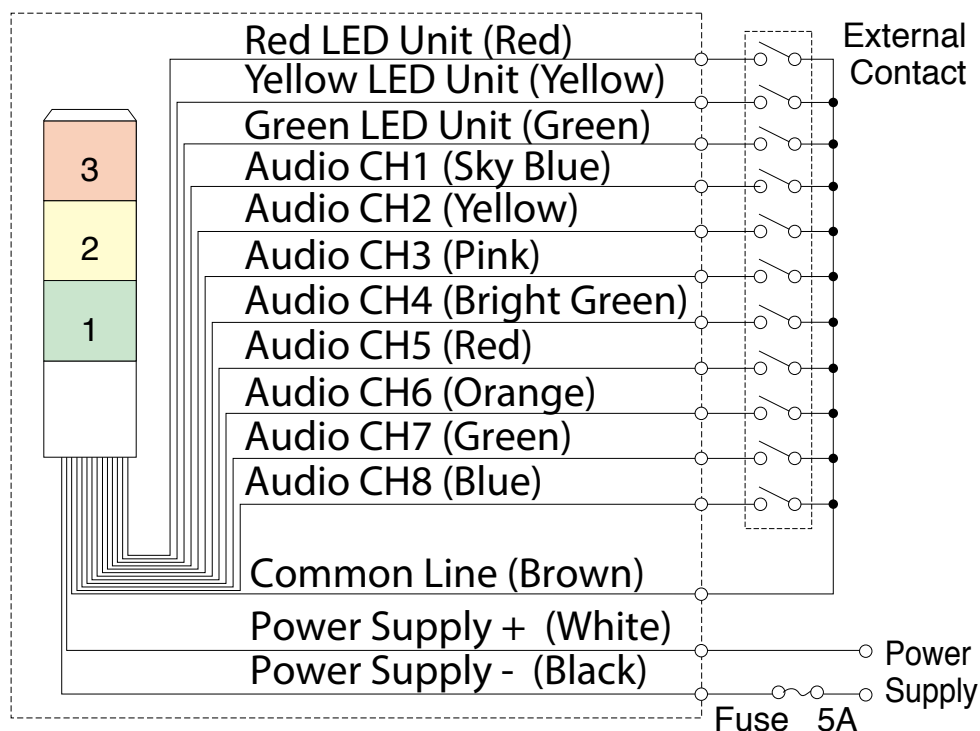
Dimensions (Unit: mm)



Mounting Dimensions



Wiring



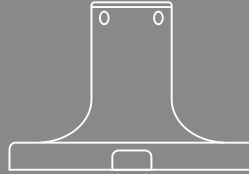
Channel Priority:
 8 (Blue) > 7 (Green) > 6 (Orange) > 5 (Red) > 4 (Light Green) > 3 (Pink) > 2 (Yellow) > 1 (Skyblue)
 The greater number has priority when any of the channels are activated simultaneously.

Specifications

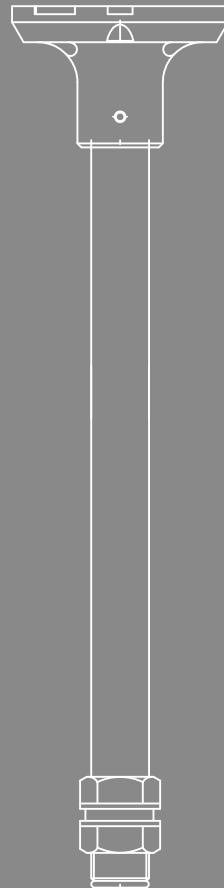
| Model | Rated Voltage | Operating Voltage Range | Power Consumption | Bulb | | Rotations per Minute | Sound Level | Operating Temperature Range | Channels | Mass |
|--------|---------------|-------------------------|-------------------|---------|-----------|----------------------|--------------|-------------------------------|----------|-------|
| | | | | Ratings | Repl. No. | | | | | |
| 1 Tier | KJT- 102 | 24V AC/DC | AC/DC 21 - 27V | 25W/18W | 24V 10W | 10 | 95dB (at 1m) | -20°C - +50°C (85%RH or less) | 8 Ch | 1.4kg |
| | KJT- 110 | AC 100V | AC 90 - 110V | 20W | 12V 5W | 12 | | | | 1.7kg |
| | KJT- 120 | AC 200V | AC 180 - 240V | | | | | | | 2.0kg |
| 2 Tier | KJT- 202 | 24V AC/DC | AC/DC 21 - 27V | 36W/28W | 24V 10W | 10 | | | | 2.0kg |
| | KJT- 210 | AC 100V | AC 90 - 110V | 26W | 12V 5W | 12 | | | | 2.4kg |
| | KJT- 220 | AC 200V | AC 180 - 240V | | | | | | | 2.6kg |
| 3 Tier | KJT- 302 | 24V AC/DC | AC/DC 21 - 27V | 47W/38W | 24V 10W | 10 | | | | 2.6kg |
| | KJT- 310 | AC 100V | AC 90 - 110V | 32W | 12V 5W | 12 | | | | 3.0kg |
| | KJT- 320 | AC 200V | AC 180 - 240V | | | | | | | |

Notes:

- Actual sound level will depend on sound type and operating conditions.
- Even when starting two or more units simultaneously, a lag will occur during message playback.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thompson Licensing



Optional Parts

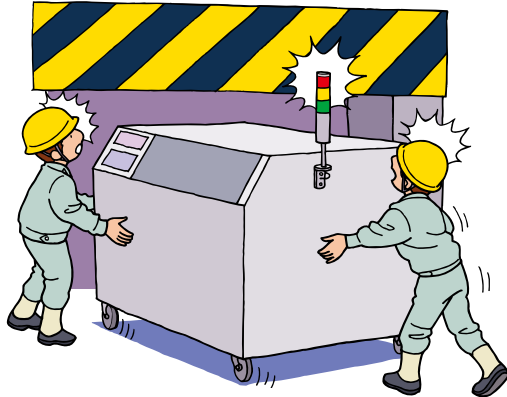


Optional Parts

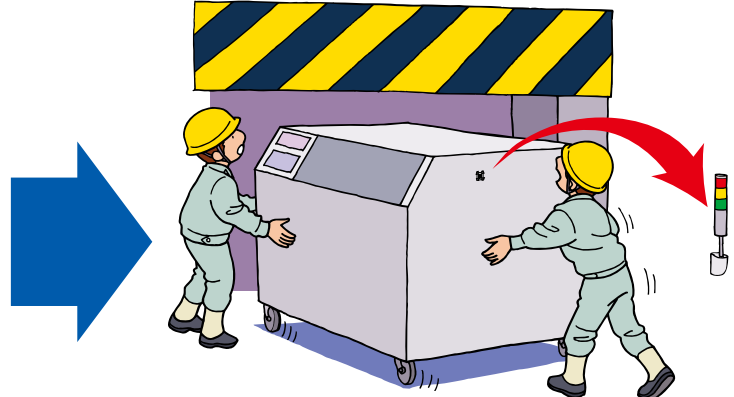
Wall Mount Bracket

- **Avoid Potential Trouble when moving machinery!**
- **Easily removable connection! (Wiring unplugs along with it!)**
- **Easy to disconnect when needing repair!**

BEFORE ...



AFTER ...



Easy steps to installing the bracket



Drill the holes on the machine to attach the mounting connector and bracket.



Fix the mounting parts onto the machine with the proper hardware.



Join the connectors together.



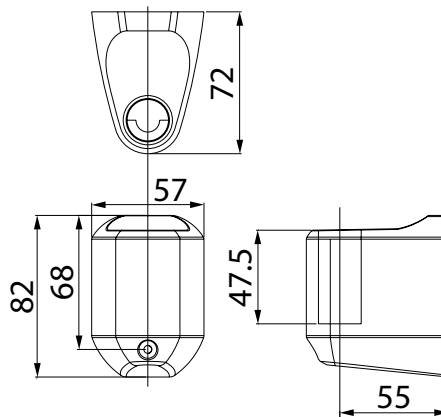
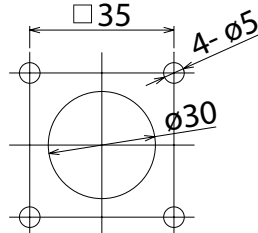
Hook the mounting bracket onto the metal tabs and attach it with the screws.

SZ-020 (For $\phi 21.7\text{mm}$ Pole)

SZ-021 (For $\phi 21.7\text{mm}$ Pole)



Mounting Dimensions



Wire connector SZ-020-001 (Sold Separately)

MP Options

MP-B

Signal Tower Option

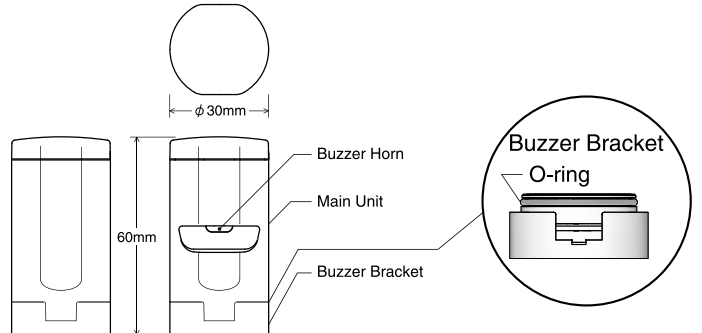


FEATURES

- Double-insulation for enhanced durability and safety
- Direct mount installation with just a single screw
- Main body made of heat resistant ABS resin for superior impact resistance
- Compatible with the MP and MPS Signal Tower (The Red module is required when using the optional MP-B)
- Operates in conjunction with the Red LED module (Alarm activation with other colors must be special ordered).

| Model | Rated Voltage | Sound Level | Power Consumption |
|--------|---------------|--------------|-------------------|
| ⊙ MP-B | AC/DC 24V | 80dB (at 1m) | 0.7W |

⊙ Requires Red LED Module



(Unit: mm)

CLA Options



Option

Rear Attachment
(Magnetic Mount)
Model SZ-310ARM



Option

Side Attachment
(Screw Mount)
Model SZ-310AS



Option

Side Attachment
(CLB-24N Compatible)
Model SZ-310ASB



Option

Rear Attachment
(Stainless Steel Screw Mount)
Model SZ-310EU

CLK Options

M12 Quick Disconnect



4-wire M12 Socket Cable, 5m
(No. 1536308)
4-wire M12 SUS Socket Cable, 5m
(No. 1552447)

Daisy Link at a maximum of five units



4-wire M12 Link Cable, 0.6m
(No. 1518892)
4-wire M12 SUS Link Cable, 0.6m
(No. 1552638)

CLK/CWK Options

One-touch Installation



CLK-001

Angle Adjustment Bracket



SZ-320KS

Surface Mounting Bracket



SZ-330KP

Wall Mount Bracket

SZ-018

Ivory White



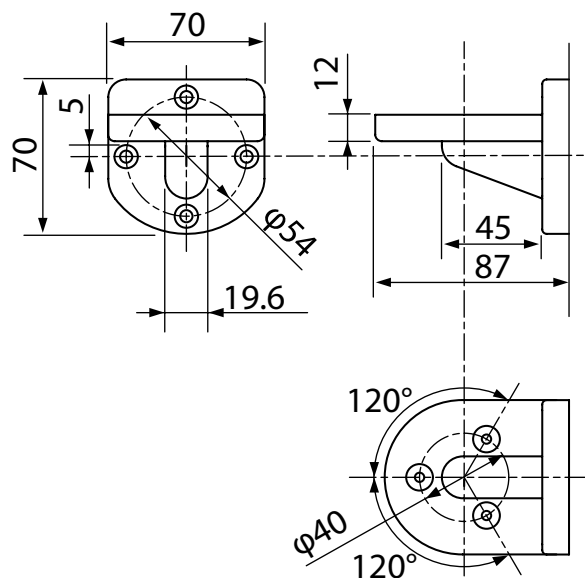
SZ-018U

Silver

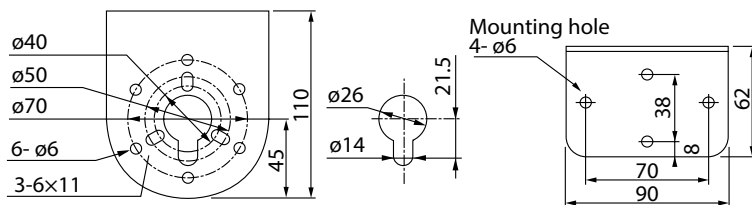


SZ-018K

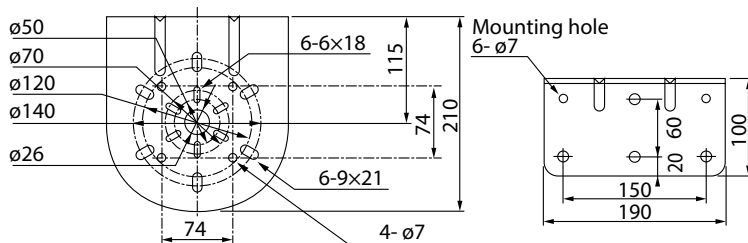
Black



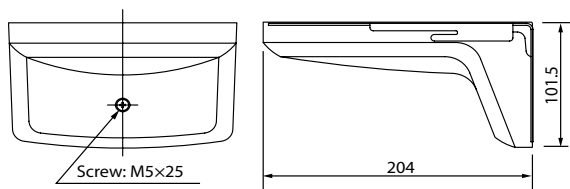
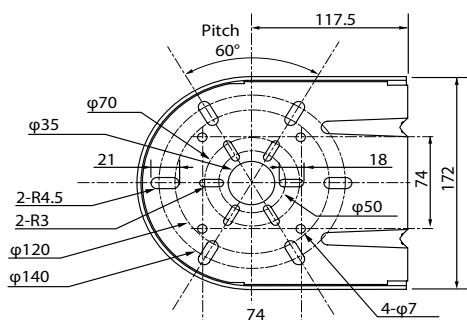
SZ-007



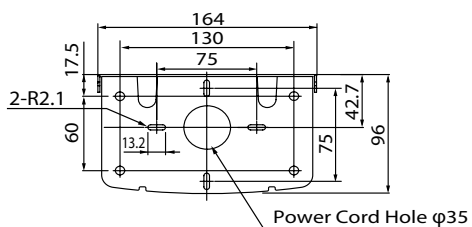
SZ-008



SZ-023

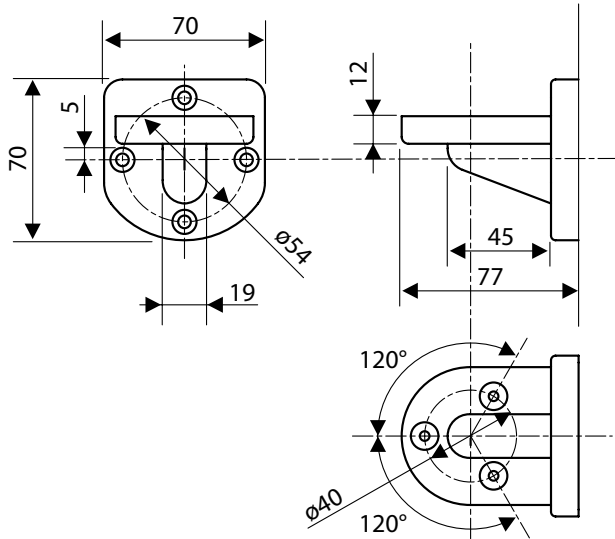


| Model | Material | Compatible Models |
|--------|--------------------------------------|---|
| SZ-017 | ADC12 | LME, RUP |
| SZ-018 | PBT/ABS | LU7, LME, LHE |
| SZ-028 | | |
| SZ-020 | ABS | LU5, LU7, LME, LMS, RUP, LC, LCS, LE, LES-A |
| SZ-021 | | |
| SZ-007 | Electro Galvanized Steel | LU7, LHE-A, Pitch for $\phi 50$, $\phi 70$, $\phi 120$, $\phi 140$ and 74mm^2 |
| SZ-008 | | |
| SZ-023 | Bracket: Steel Bracket Cover: ABS | Pitch for $\phi 50$, $\phi 70$, $\phi 120$, $\phi 140$, and 74mm^2 |
| SZ-012 | SPHC | LCE, LCS, LE, LES, LME, ME, MP |
| SZ-013 | | |



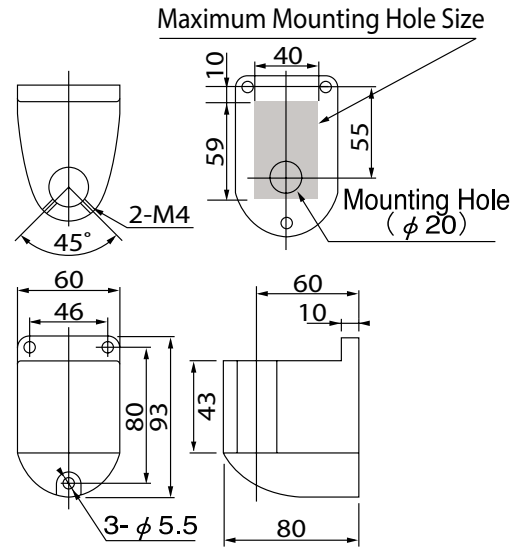
Wall Mount Bracket

SZ-028

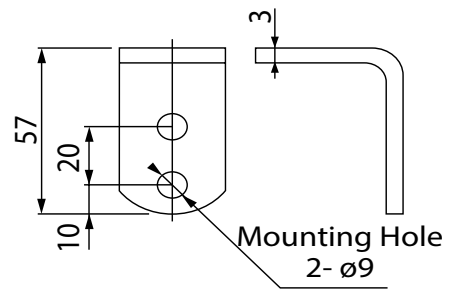
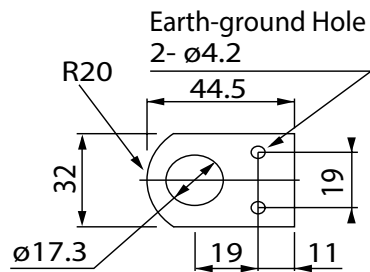


SZ-017

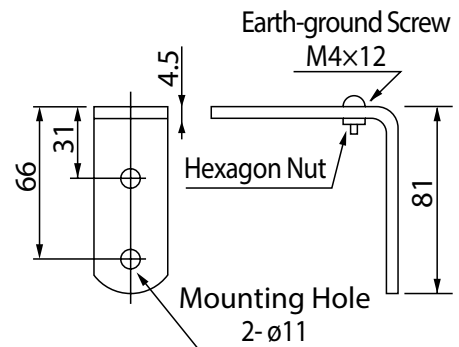
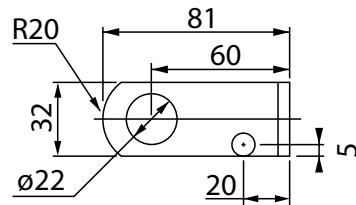
(For $\phi 21.7\text{mm}$ Pole)



SZ-012 (Pole not included)



SZ-013 (Pole not included)



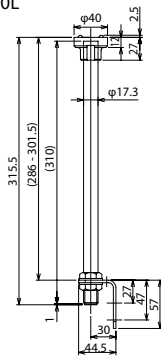
Mounting Pole

φ50 (φ40)

SZ-80L

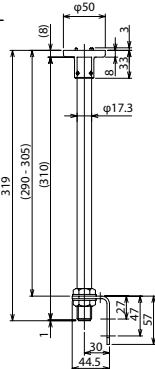


SZ-80L



Includes SZ-012

SZ-60L



SZ-60L

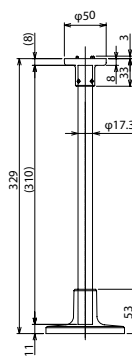


Includes SZ-012

SZ-60T



Includes SZ-011



| Model | Material | | | | | |
|--------|---------------|-------------------|-------------|--------------|------------------|------------------------|
| | Upper Bracket | Pole | 'L' Bracket | Cord Bushing | Mounting Bracket | Compatible Models |
| SZ-80L | ABS | Carbon-steel Pipe | SPHC | 6/6 Nylon | — | LCE-W |
| SZ-60L | ADC12 | | SPHC | 6/6 Nylon | — | LE-W, LES-AW |
| SZ-60T | — | — | — | — | ADC12 | — |
| SZ-70L | ABS | Carbon-steel Pipe | SPHC | EPT | — | LME-W |
| SZ-50L | ADC12 | | SPHC | EPT | — | LU7, LHE-A |
| SZ-50T | — | — | — | — | ADC12 | — |
| SZ-40L | ADC12 | Carbon-steel Pipe | SPHC | EPT | — | KUS |
| SZ-40T | — | | — | — | — | ADC12 |
| SZ-30L | ABS | Carbon-steel Pipe | SPHC | EPT | — | RLE, RU, RH, PS, PES-A |
| SZ-30T | | | — | — | — | ADC12 |

ADC12: Aluminum Alloy Die-cast

EPT: Ethylene Propylene Rubber

PBT: Polybutylene Terphthalates

SPHC: Hot Rolled Milled (Sheet) Steel

CRMS: Cold-rolled Milled Steel

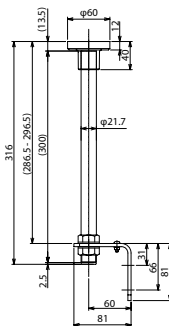
ABS: Acrylonitrile Butadiene Styrene

φ60

SZ-70L



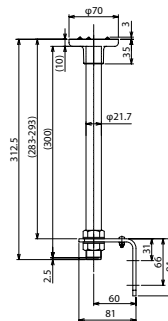
Includes SZ-013



SZ-50L



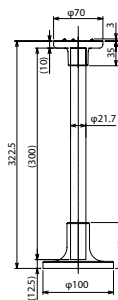
Includes SZ-013



SZ-50T



Includes SZ-010

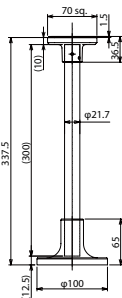


70 sq.

SZ-40T



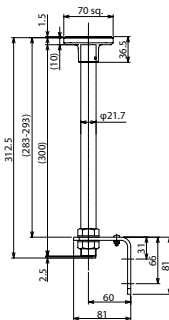
Includes SZ-013



SZ-40L



Includes SZ-010



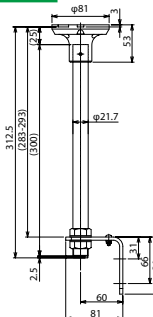
φ81

SZ-30L



Includes SZ-013

Cannot use with Rubber Gasket.

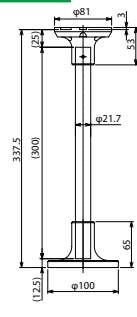


SZ-30T



Includes SZ-010

Cannot use with Rubber Gasket.

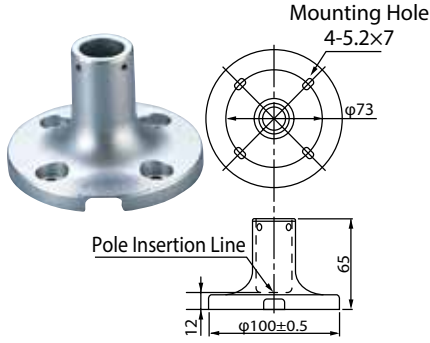


Mounting Bracket

SZ-010

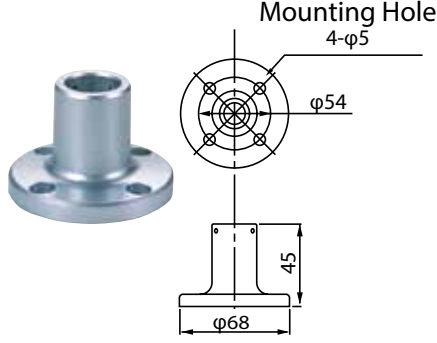


For $\phi 21.7\text{mm}$ Pole



SZ-016A

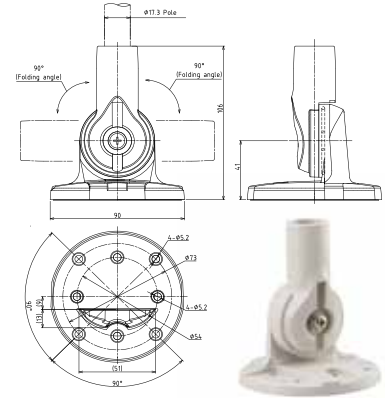
For $\phi 21.7\text{mm}$ Pole



SZ-17Q



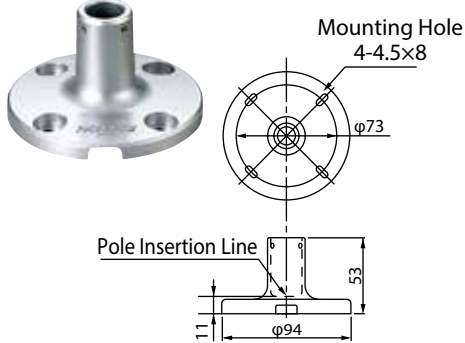
For $\phi 17.3\text{mm}$ Pole



SZ-011

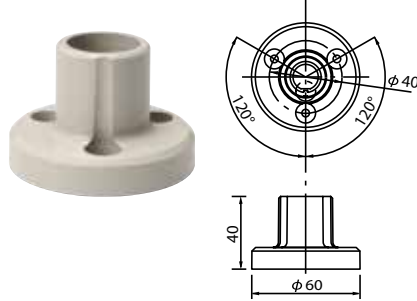


For $\phi 17.3\text{mm}$ Pole



SZ-70-B

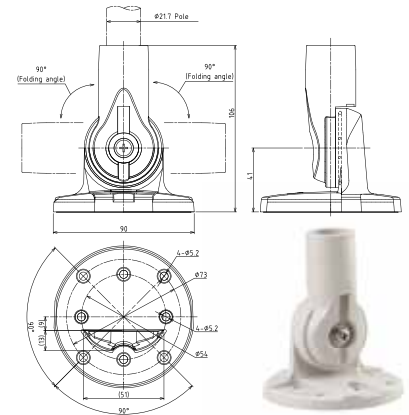
For $\phi 21.7\text{mm}$ Pole



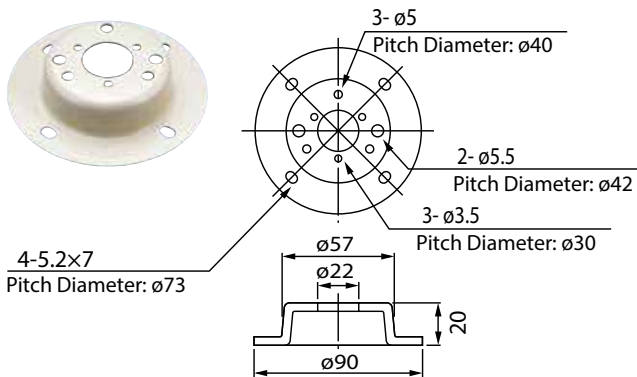
SZ-22Q



For $\phi 21.7\text{mm}$ Pole



SZ-014



| Model | Material | Compatible Models |
|---------|----------|------------------------------|
| SZ-010 | ADC12 | RUP, LME, LMS, LHE |
| SZ-011 | | LCE, LCS, LE, LES-A |
| SZ-016A | | LU5, LU7, RUP, LME, LMS, LHE |
| SZ-014 | CRMS | LE, LES-A |
| SZ-70-B | ABS | $\phi 21.7\text{mm}$ Pole |
| SZ-17Q | ABS | $\phi 17.3\text{mm}$ Pole |
| SZ-22Q | ABS | $\phi 21.7\text{mm}$ Pole |

LU7 Upper Bracket



SZ-50-U

Ivory White



SZ-50U-U

Silver

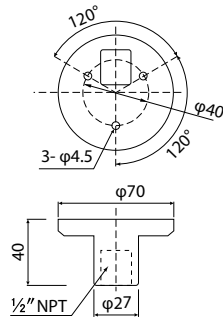
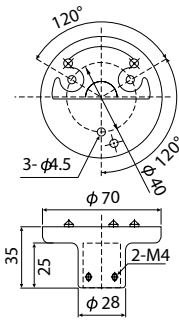


SZ-50NPT



SZ-50K-U

Black



LU5 Upper Bracket

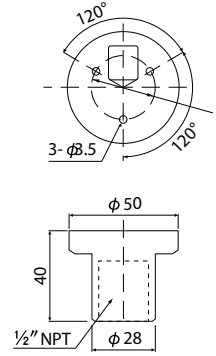
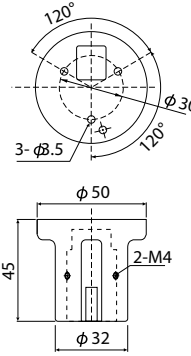
SZ-60-U

For φ21.7mm Pole



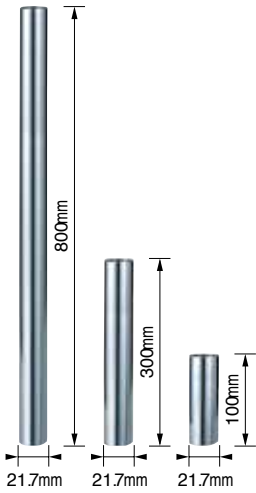
SZ-60NPT

For 1/2" NPT Pole



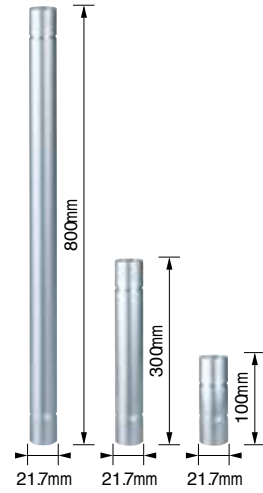
Pole

Steel Pole



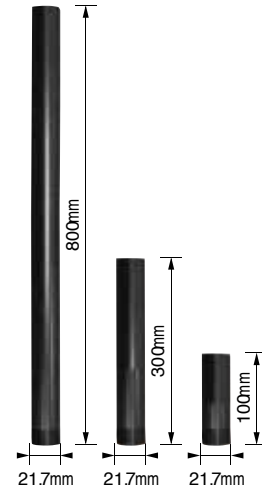
| | |
|-------|---------------|
| 800mm | : POLE-800S21 |
| 300mm | : POLE-300S21 |
| 100mm | : POLE-100S21 |

Aluminum Pole



| | |
|-------|---------------|
| 800mm | : POLE-800A21 |
| 300mm | : POLE-300A21 |
| 100mm | : POLE-100A21 |

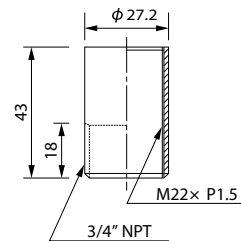
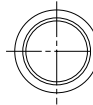
Black Aluminum Pole



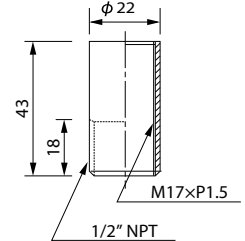
| | |
|-------|----------------|
| 800mm | : POLE-800A21K |
| 300mm | : POLE-300A21K |
| 100mm | : POLE-100A21K |

NPT Adaptor

SZ-904



SZ-903

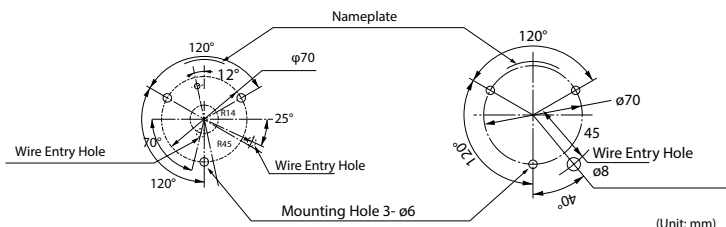


Rubber Gasket

SZ-200A



Mounting Dimensions

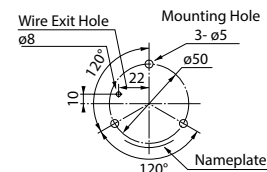


(Unit: mm)

SZ-210



Mounting Dimension



(Unit: mm)

LS7 Options

Wall Mounting Bracket SZ-110



SZ-110



SZ-110S



SZ-110D

Replacement Parts



O-Ring for LS7
Part No.: Z35721039-F1



Mount Cover for LS7
(Accessory)
Part No.: B81910001-F1

Platform Bracket SZ-100



SZ-100



SZ-100S



SZ-100D



Outer Cover for LS7*
Part No.: B45110011-F1
*Only for connecting to the LS7.



M12 Connector & Cable
Manufactured by the OMRON Corp.)
SZ-120-02 Cable Length 2 m (XS2F-D821-DH0-R)
SZ-120-05 Cable Length 5 m (XS2F-D821-GH0-R)
SZ-120-10 Cable Length 10m (XS2F-D821-JH0-R)
*Only for connecting to the LS7.

Multi-mount Bracket SZ-130



SZ-130

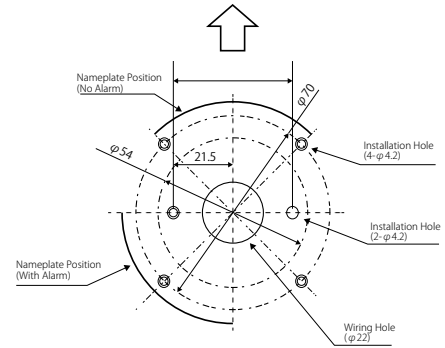


SZ-130S



SZ-130D

Front (Audible Alarm Opening)



LA6 Options



• Waterproof O-ring
B25110047-F1



• Waterproof Ring 'B'
B25110042-F1



• USB Port Cover
(Off-white) B22100071-7F1
(Silver) B22100071-9F1



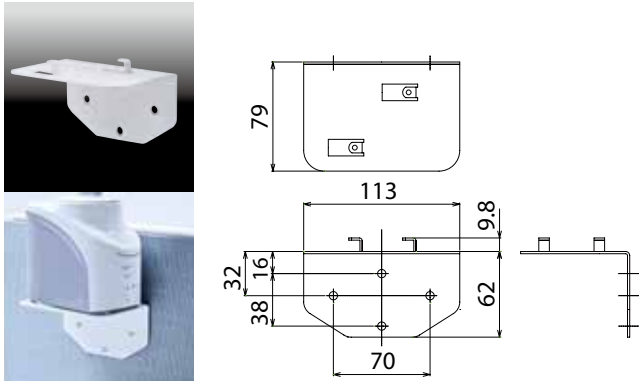
• Pole Bracket
(Off-white) B22210134-7F1



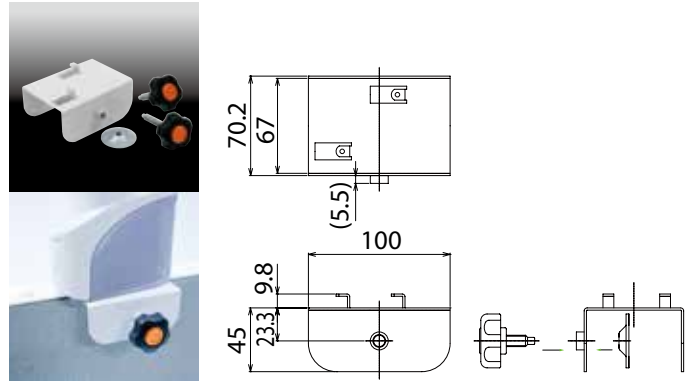
• Headcover
(Off-white) B31310001-7F1
(Silver) B31310001-9F1

NHL Options

Wall Mount Bracket NH-WST



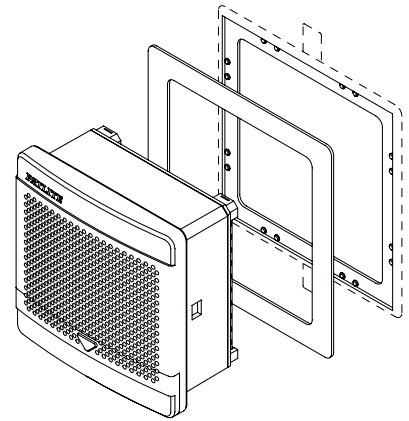
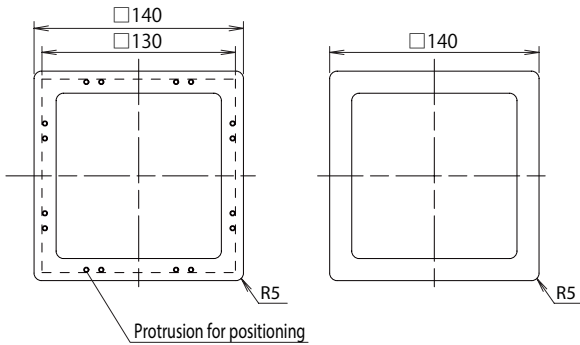
Partition Bracket NH-PST



BKV Options

BK-001 Size Adjustment Bracket

This bracket is used to install the annunciator in a place where holes have already been drilled for legacy PATLITE Products (φ133mm² Type)



RFT/RFV Options

Wall Mount Bracket

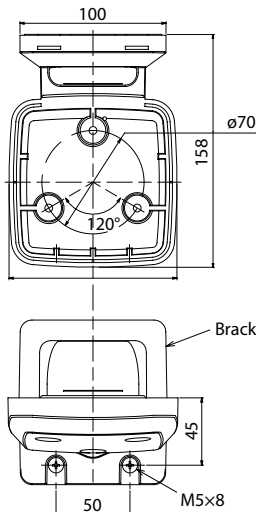


Ceiling Mount Bracket



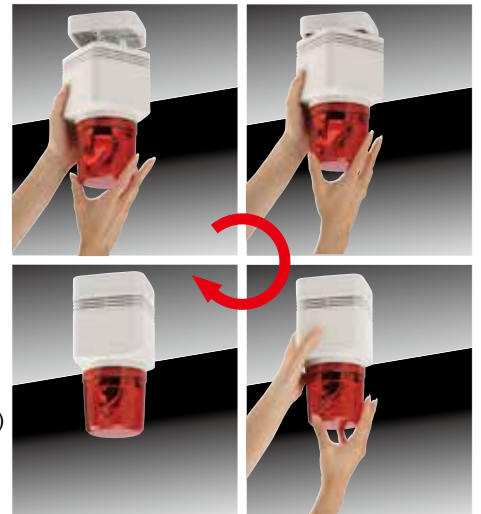
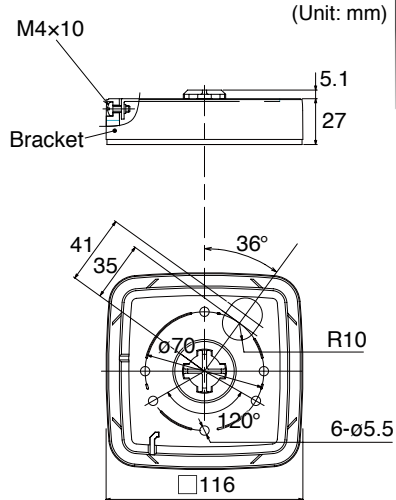
RF-001 Wall Mount Bracket

(Unit: mm)



RF-002 Ceiling Mount Bracket

(Unit: mm)



Melody Charts

| Type A (Japan Only) | | | |
|-------------------------------|------------------------------|--------------------------|-----------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Stutter + Bell | Synthesized Melody Chime | Chime | Call Sign |
| Fur Elise | Maiden's Prayer | Bach Minuet in Gmaj | Annie Laurie |
| London Bridge is falling down | Hol-di-ri-Dia | Mary had a little Lamb | Camptown Races |
| Cuckoo Song | Village Blacksmith | On the Bridge of Avignon | Daydream Believer |
| Amaryllis | Mozart Symphony No. 40 | Quiet Lakeside | Ich bin ein Musikante |
| Spanish Romance | Katyusha | Grandfather's Clock | Ave Maria |

| Type D (Japan Only) | | | |
|-----------------------------------|--------------------------------|--------------------------------|------------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Runner | Mamotte Agetai | Chime | Call Sign |
| Iribiao Kikinagara | September | Doyoubino Koibito | Akino Kehai |
| Saafu Tengoku Sukii Tengoku | Iro White-blend | Happy Birthday | Hi Ho |
| I've been working on the Railroad | The Bear Song | Toys Go "Cha-cha-cha" | Konnako Irukana |
| Schubert's Lullaby | Rudolph the red-nosed Reindeer | She Wore a Yellow Ribbon | My Darling, Clementine |
| Yellow Rose of Texas | Yankee Doodle | When the Saints Go Marching In | Londonderry Air |

| Type C (Japan Only) | | | |
|-------------------------------|------------------------------|-------------------------|------------------------------------|
| Beep (slow intermittent) | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren) |
| Rapid Hi-Lo | Melody Chime | Synthesized Piano | Synthesized Bell |
| Stutter + Bell | Synthesized Melody Chime | Chime | Call Sign |
| Can't take my eyes off of you | Top of the World | The Entertainer | Amazing Grace |
| Amairono Kamino Otome | Les Champs-Elysees | Canon | Rara Sunshine |
| Uchuusenkan Yamamoto | Oshiete | Makenaide | Gonna Fly Now (Theme from "Rocky") |
| I don't Wanna Miss a Thing | Yozorano Mukou | Aiwa Katsu | Haruyo Koi |
| Gattsudaze | Odorou Ponpokorin | Imasugu Kisu Mi | Truth |

| Type E (Worldwide) | | | |
|------------------------------|------------------|---------------------|-------------------------------|
| Beep (slow intermittent) | Stutter + Bell | Inverted Reveille | Annie Laurie |
| Stutter (rapid intermittent) | Melody Chime | Galactic Motor | London Bridge is falling down |
| Bell (clear high-pitch) | Chime | Ringin Phone | Mary had a little Lamb |
| Yelp (rapid siren) | Call Sign | Two Tone | Camptown Races |
| Rapid Hi-Lo | Train Ride | Alarm Clock | Amaryllis |
| Melody Chime | Gallop Hi-Lo | Ringin Hi-Lo | Mozart Symphony No. 40 |
| Synthesized Piano | Alien Chatter | Fur Elise | Ave Maria |
| Synthesized Bell | Falling Crystals | Bach Minuet in Gmaj | Grandfather's Clock |

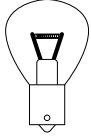
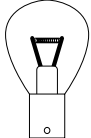
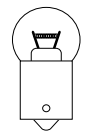
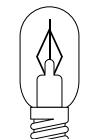
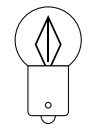
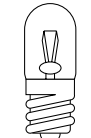

| Type-F (Japan Only) | | | | |
|------------------------------|------------------------|-------------------------------|-------------------------|--------------------------------|
| Beep (slow intermittent) | Spring Melody | A Maiden's Prayer | Quiet Lakeside | BANZAI SUKIDE YOKATTA |
| Stutter (rapid intermittent) | Game Intermission | Bach Minuet in Gmaj | The Music Man | NAMONAKI UTA |
| Bell (clear high-pitch) | Jalopy Horn | Annie Laurie | Spanish Romance | SOUSEINO AKUERION |
| Yelp (rapid siren) | ET Doorbell | London Bridge is falling down | Katyusha | MAMBO NO 5 |
| Rapid Hi-Lo | RR-crossing | Holdiridia | Ave Maria | The Parade of the Tin Soldiers |
| Melody Chime | Digital Train Whistle | Mary had a little Lamb | Grandfather's Clock | Turkey in the Straw |
| Synthesized Piano | Train Ride | The Camptown Races | RHYTHM AND POLICE | Aka tomo |
| Synthesized Bell | Starting Notice Chime1 | Cuckoo Song | ZANKOKUNA TENSINO TEEZE | Funiculi, Funicula |
| Stutter + Bell | Starting Notice Chime2 | Village Blacksmith | MAJINGAA ZETTO | Furusato |
| Melody Chime | Starting Notice Chime3 | On the Bridge of Avignon | HATARAKU KURUMA | Beautiful Dreamer |
| Chime | Ending Notice Chime1 | Daydream Believer | NINGENTE IINA | JOLLY HOLIDAY |
| Call Sign | Ending Notice Chime2 | Amaryllis | ROBINSON | |
| Galactic Hovercraft | Fur Elise | Mozart Symphony No. 40 | WORLD FOOTBALL ANTHEM | |

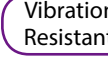
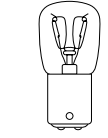
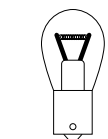
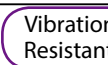
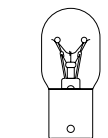
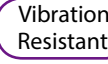
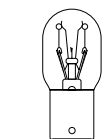

Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C, Type-D and Type-F melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody charts Type-E and Type-G are recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

| Type-G (Worldwide) | | | | |
|------------------------------|---------------------|-------------------------------|-----------------------------------|-----------------------------|
| Beep (slow intermittent) | Gallop Hi-Lo | ET Doorbell | Mozart Symphony No. 40 | Polka Trablanka |
| Stutter (rapid intermittent) | Alien Chatter | RR-crossing | Ave Maria | O Vreneli |
| Bell (clear high-pitch) | Falling Crystals | Starting Notice Chime1 | Grandfather's Clock | KAERUNO GASSHOU |
| Yelp (rapid siren) | Inverted Reveille | Starting Notice Chime2 | The Parade of the Tin Soldiers | El Condor Pasa (If I Could) |
| Rapid Hi-Lo | Galactic Motor | Ending Notice Chime1 | If You're Happy and You Know It | Hungarian Dance No.5 |
| Melody Chime | Ringin Phone | Ending Notice Chime2 | Flea Waltz | William Tell Overture |
| Synthesized Piano | Two Tone | Fur Elise | Turkey in the Straw | Pomp and Circumstance |
| Synthesized Bell | Alarm Clock | Bach Minuet in Gmaj | The Battle Hymn of the Republic | Comedians' Galop |
| Stutter + Bell | Ringin Hi-Lo | Annie Laurie | J'ai perdu le do de ma clarinette | Nedelka |
| Melody Chime | Galactic Hovercraft | London Bridge is falling down | Can-can | Moonlight Serenade |
| Chime | Spring Melody | Mary had a little Lamb | Radetzky March | WAREWA UMINO KO |
| Call Sign | Game Intermission | The Camptown Races | Funiculi, Funicula | |
| Train Ride | Jalopy Horn | Amaryllis | Csikos Post | |

Replacement Bulbs

| Model | Bulb No. | Ratings | Part No. |
|---|----------|-----------------------------------|---------------|
|  RP35/BA15S | 1 | 12V 35W | D01203501-F1 |
| | 2 | 24V 35W | D02403501-F1 |
|  RP35/BA15D | 5 | 48V 35W | D04803502-F1 |
|  G18/BA15S | 8 | 6V 3W | D00600303-F1 |
| | 9 | 12V 10W | D01201003A-F1 |
| | 10 | 24V 10W | D02401003A-F1 |
| | 11 | 48V 10W | D04801003-F1 |
| | 12 | 12V 5W | D01200503A-F1 |
|  T20/E12 | 13 | 30V 10W | D03001006A-F1 |
| | 14 | 110V 10W | D11001006A-F1 |
| | 15 | 220V 10W | D22001006A-F1 |
| | 16 | 110V 15W | D11001506A-F1 |
| | 17 | 220V 15W | D22001506A-F1 |
|  G14/BA9S | 18 | 12V 6W | D01200604-F1 |
| | 19 | 24V 6W | D02400604-F1 |
|  T10/E10 | 22 | 110V 3W | D11000307-F1 |
| | 27 | 12V 0.11A | D012/1107-F1 |
| | 28 | 24V 0.11A | D024/1107-F1 |
|  RP35/BA15D | 36 | 120V 40W (Vibration Resistant) | D12004024-F1 |
| | 37 | 220V 30W | D22003024-F1 |

| Model | Bulb No. | Ratings | Part No. |
|--|--|----------|--------------|
|  Vibration Resistant | 39 | 28V 11W | D02801111-F1 |
|  T20/BA15D | 40 | 110V 12W | D11001211-F1 |
| | 41 | 250V 11W | D25001111-F1 |
|  S25/BA15S | 42 | 12V 23W | D01202305-F1 |
| | 43 | 24V 25W | D02402505-F1 |
|  Vibration Resistant | 50 | 28V 20W | D02802011-F1 |
|  T20/BA15D | | | |
|  Vibration Resistant | 51 | 110V 20W | D11002011-F1 |
|  T20/BA15D | 53 | 250V 20W | D25002011-F1 |
| |  G18/BA15S | 54 | 12V 15W |
| 55 | | 24V 20W | D02402003-F1 |

* Some bulbs may not be available due to part or product discontinuation without prior notice.

MEMO

For more details, visit our website at <http://www.patlite.com>

MEMO

For more details, visit our website at <http://www.patlite.com>



PATLITE Corporation

4-4-25, Hommachi, Chuo-ku, Osaka-shi, 541-0053 Japan
International Sales Division
TEL: +81-6-7711-8953 FAX: +81-6-7711-8961
E-mail: overseas@patlite.co.jp

PATLITE (U.S.A.) Corporation

20130 S. Western Ave. Torrance, CA 90501, U.S.A.
TEL: +1-310-328-3222 FAX: +1-310-328-2676
E-mail: sales@patlite.com

PATLITE (SINGAPORE) PTE LTD

No.2 Leng Kee Road, #05-01 Thye Hong Centre, Singapore 159086
TEL: +65-6226-1111 FAX: +65-6324-1411
E-mail: sales@patlite.com.sg

PATLITE (CHINA) Corporation

Room 1102-1103, No.55, Lane 777, Guangzhong Road (West), Zhabei District, Shanghai, China 200072
TEL: +86-21-6630-8969 FAX: +86-21-6630-8938
E-mail: sales@patlite.cn

PATLITE Europe GmbH

Am Soeldnermoos 8, D-85399 Hallbergmoos, Germany
TEL: +49-811 9981 9770-0 FAX: +49-811 9981 9770-9 E-mail:
info@patlite.eu

PATLITE KOREA CO., LTD.

A-2603, Daesung D-POLIS, 606, Seobusaet-gil, Geumcheon-gu, Seoul, 08504, Korea
TEL: +82-2-523-6636 FAX: +82-2-861-9919
E-mail: sales@patlite.co.kr

PATLITE TAIWAN CO., LTD.

7F. No. 91, Huayin St, Datong District Taipei, Taiwan R.O.C
TEL: +886-2-2555-1611 FAX: +886-2-2555-1621
E-mail: info@patlite.tw

P.T. PATLITE INDONESIA (FACTORY)

LOT 321 Batamindo Industrial Park, Jalan Beringin Mukakuning, Batam 29433 Indonesia
TEL: +62-770-61-1123 FAX: +62-770-61-2444