# LED LIGHTING

PUBLIC TRANSPORT & COMMERCIAL VEHICLES



### WORLD LEADERS IN LED TECHNOLOGY



JW Speaker is a world leading LED lighting manufacturer who produces technologically advanced products for leading OEM and aftermarket customers around the world. As highly respected supplier to a wide range of markets such as achriculture, construction, on-road commercial, material handling, mining, motorcycle, recreation and military, the range of LED products produced by JW Speaker covers just about every application imaganable.

In this brochure we focus on the LED products for the public transportion and commercial vehicles.

### REGULATIONS

#### SURPASSING STANDARDS WORLDWIDE.

J.W. Speaker is committed to making the best products to be used legally on-road around the world. To do that, we design lights that meet and exceed the requirements for a variety of regulations:



The Federal Motor Vehicle Safety Standard regulates all automotive lighting, signaling, and reflective devices in the U.S.A. and is enforced by the Department of Transportation (**DOT**)



Transport Canada is responsible for developing regulations, policies, and services relating to transportation in Canada



Many countries recognize the United Nations Economic Commission for Europe (ECE) Transport Division's regulations and mirror the ECE regulations in their own national requirements



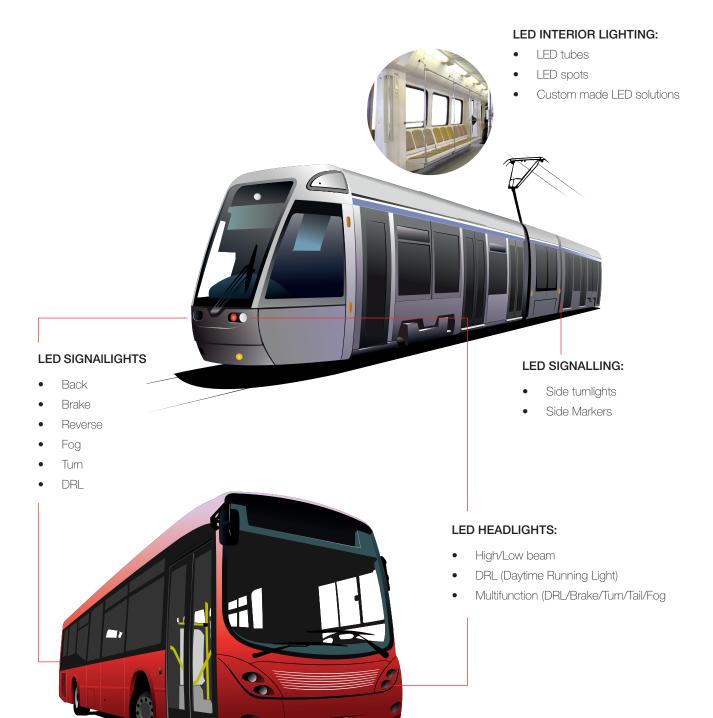
The Australian Design Rules (ADR) are national standards for vehicle safety, anti-theft, and emissions



SAE International develops standards for the engineering of powered vehicles mainly in the U.S.A. and Canada, including cars, trucks, boats, aircraft, and more



### **OUR POSSIBILITIES**



With our wide range of standard products we are able to find a solution for almost any existing system available. Our team of experienced engineers are able to create innovative lighting technology to fit the requirements of your bus and rail projects. The team can guide you through the entire bespoke design process, from producing initial sketches to designing a prototype and offer full post-production services.



### MODEL 93









#### Raw Lumen Output:

630 (High Beam); 1,910 (Low Beam)

#### **Effective Lumen Output:**

230 (High Beam); 575 (Low Beam)

#### Candela Output:

45,000 (High Beam); 18,500 (Low Beam)

#### Connector/Wiring:

High Beam: Deutsch DT04-3P Low Beam: Deutsch DT04-2P

#### Operating Voltage:

10-31V DC

#### **Current Draw:**

Low Beam: 1.97A @ 12V; 0.98A @ 24V DC High Beam: 0.80A @ 12V; 0.40A @ 24V DC Front Position: 0.40 @ 12V; 0.20 @ 24V DC

### **Retrofit Information:**

Standard 90mm lamps

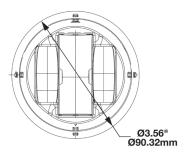
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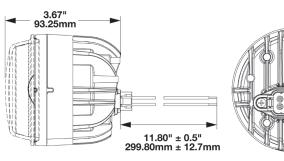












1 Lux

0.25 Lux

10+ Lux 30m 1 Lux

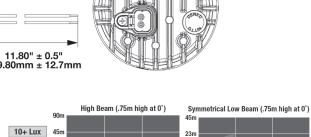
0.25 Lux

PART #	DESCRIPTION
0553081	SAE/ECE/Reg113/Low
0553091	ECE/LHT/Reg112/Low
0553101	DOT/ECE/RHT/Reg112/Low
0553071	DOT/ECE/High
0554381	SAE/ECE/High with FP
0556701	SAE/ECE/Fog Lamp
0347941	SAE/ECE/DRL/Turn Signal

PART #	ACCESSORIES
8001601	Single Lamp Pedestal Mount Bracket
8001461	1.5mm 3-Point Mount
8001471	3.0mm 3-Point Mount







0n

23m

Raw Lumen Output:

1,800 (High Beam); 1,600 (Low Beam)

Effective Lumen Output: 497 (High Beam); 321 (Low Beam)

Candela Output:

41,800 (High Beam); 14,600 (Low Beam)

Connector/Wiring: Deutsch DT04-4P

Operating Voltage:

10-32V DC

**Current Draw:** 

High Beam: 1.8A @ 12V; 1.0A @ 24V DC Low Beam: 1.5A @ 12V; 0.8A @ 24V DC Front Position: 0.1A @ 12V; 0.06A @ 24V DC

**Retrofit Information:** 100mm Bi-LED Headlamp









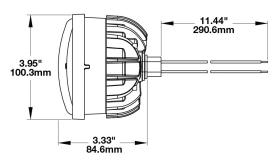


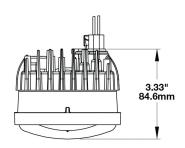








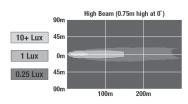




PART #	DESCRIPTION
0554831	DOT/ECE/RHT/High/Low/Reg 11:
0554911	ECE/LHT/High/Low/Reg 112
0554921	DOT/ECE/High/Low/Reg 113

PART #	MOUNTING OPTIONS
8001511	3-Point Mount for 3mm Mounting Frame
8001521	Single Lamp Pedestal Mount Bracket





	45m	Reg 113 Low Beam (0.75m h	igh at 0°)
10+ Lux	23m		
1 Lux	0m		
0.25 Lux	23m		
	45m	50m 100m	



### MODEL 8630 & 8631 EVOLUTION









#### PRODUCT SPECIFICATIONS

Raw Lumen Output:

2,925 (High Beam); 2,025 (Low Beam)

**Effective Lumen Output:** 

1,000 (High Beam); 630 (Low Beam)

Candela Output:

61,684 (High Beam); 19,162 (Low Beam)

Connector/Wiring:

Integral Connector in Housing simulating

Delphi #12124107

Operating Voltage:

10-32V DC

**Current Draw:** 

Low Beam: 2.20A @12V; 1.70A @14V; 1.10A @24V High Beam: 3.50A @12V; 2.70A @14V; 1.70A @24V

Turn: 1.40A @12V; .70A @24V

8630 FP: .09A @12V; .07A @14V; .04A @24V 8630 DRL: .90A @12V; .68A @14V; .38A @24V

8631 FP: .05A @12V; .05A @24V 8631 DRL: 1.10A @12V; .70A @24V

**Retrofit Information:** 

5.75" Round (PAR46)

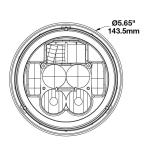
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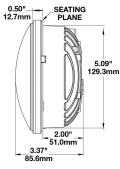


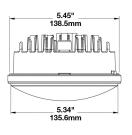












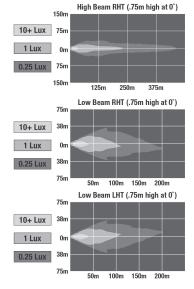
#### **MODEL 8630**

PART #	DESCRIPTION
0549911	DOT/ECE/RHT/High/Low/FP & DRL
0549921	ECE/LHT/High/Low/FP & DRL
0550921	DOT/High/Low

PART #	ACCESSORIES
3157751	Double Lamp Mounting Ring Kit
8200001	Single Lamp Mounting Ring Kit

#### **MODEL 8631**

PART #	DESCRIPTION
0551641	ECE/LHT/High/Low/Turn/FP & DRL
0551631	DOT/ECE/RHT/High/Low/Turn/FP & DRL



If your vehicle is operated in the United States you do NOT need to connect the Front Position wire (red) unless your vehicle is equipped with a front position light



Raw Lumen Output:

4,170 (High Beam); 2,340 (Low Beam)

**Effective Lumen Output:** 

1,340 (High Beam); 694 (Low Beam)

Candela Output:

84,700 (High Beam); 30,600 (Low Beam)

Connector/Wiring:

H4

Operating Voltage:

9-32V DC

**Current Draw:** 

High Beam: 3.60A @ 12V; 1.80A @ 24V DC Low Beam: 2.00A @ 12V; 1.10A @ 24V DC Front Position: 0.16A @ 12V; 0.10A @ 24V DC

DRL: 1.60A @ 12V; 0.80A @ 24V DC

**Retrofit Information:** 

7" Round (PAR56)

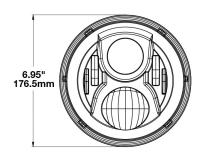


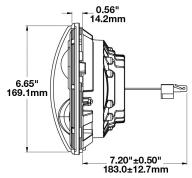


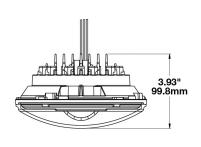






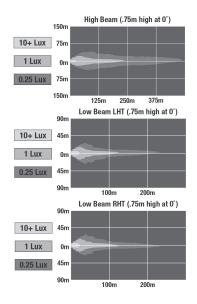






PART #	BEZEL	DESCRIPTION
0556981	Black	ECE/RHT/High/Low/FP & DRL
0556971	Chrome	ECE/RHT/High/Low/FP & DRL
0556961	Black	ECE/LHT/High/Low/FP & DRL
0556951	Chrome	ECE/LHT/High/Low/FP & DRL

PART #	ACCESSORIES
3156561	Panel Mount Bucket Assembly
3156351	Mounting Ring Kit for 7" Round (PAR56) Headlights
3266081	Jumper Harness H4/H13
8000381	Anti-Flicker Harness H4/H4
8000311	Anti-Flicker Harness H4/H13





### 8900 EVOLUTION 2





#### **Raw Lumen Output:**

2,640 (High Beam); 2,250 (Low Beam)

#### **Effective Lumen Output:**

1,200 (High Beam); 975 (Low Beam)

#### Connector/Wiring:

H4

#### Operating Voltage:

10-32V DC

#### **Current Draw:**

High Beam: 1.94A @ 12V; 1.03A @ 24V DC Low Beam: 1.67A @ 12V; 0.87A @ 24V DC Front Position: 0.22A @ 12V; 0.16A @ 24V DC

#### **Retrofit Information:**

5" x 7" Rectangle; 2B1 Sealed Beams

#### Standards:

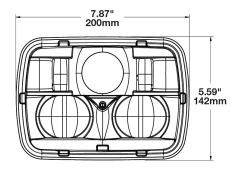


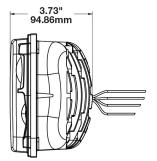


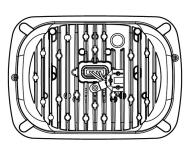






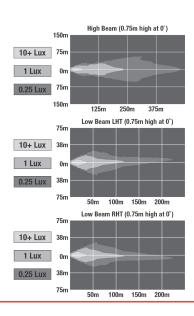






PART #	BEZEL	DESCRIPTION
0554471	Chrome	DOT/ECE/RHT/High/Low/FP
0554491	Black	DOT/ECE/RHT/High/Low/FP
0554431	Chrome	ECE/LHT/High/Low/FP
0554451	Black	ECE/LHT/High/Low/FP

If your vehicle is operated in the United States you do NOT need to connect the Front Position wire (red) unless your vehicle is equipped with a front position light.





#### **PRODUCT SPECIFICATIONS**

Raw Lumen Output:

2370 (Low Beam); 4300 (High Beam)

**Effective Lumen Output:** 

587 (Low Beam); 1060 (High Beam)

Candela Output: 58,000 (High Beam)

Connector/Wiring: 6-Pin Delphi 12052848

Operating Voltage:

9-30V DC

**Current Draw:** 

Low Beam: 3.50A @ 12V; 2.25A @ 24V DC High Beam: 5.00A @ 12V; 3.00A @ 24V DC Turn: 1.20A @ 12V DC; .75A @ 24V DC

Front Position: 2.00A @ 12V DC; 1.50A @ 24V DC

DRL: 2.50A @ 12V DC; 1.75A @ 24V DC

**Retrofit Information:** 

3" x 13" Rectangle; Pedestal Mount Headlights

#### Standards:



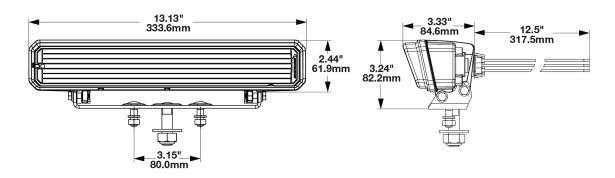












PART #	DESCRIPTION
0556273	DOT/ECE/RHT/High/Low/Turn/FP & DRL/Kit of 2
0556383	ECE/LHT/High/Low/Turn/FP& DRL/Kit of 2

High Beam (0.75m high at 0 $^{\circ}$ ) 10+ Lux 60m 1 Lux 0.25 Lux 60m 200m Low Beam RHT (0.75m high at 0°) 10+ Lux 15m 1 Lux 0.25 Lux 15m 50m 75m Low Beam LHT (0.75m high at 0°) 30m 10+ Lux 1 Lux 0.25 Lux 15m

If your vehicle is operated in the United States you do NOT need to connect the Front Position wire (red) unless your vehicle is equipped with a front position light.



### **MODEL 8770 GEN 3**







#### Raw Lumen Output:

#### **Effective Lumen Output:**

1,800 (Heated); 2,041 (Non-Heated)

#### Candela Output:

230,000 (Heated); 260,000 (Non-Heated)

#### Connector/Wiring:

Standard Sealed Beam Style Screw Terminal

#### Operating Voltage:

18-130V DC

#### **Current Draw:**

Heated/Heater On:

High Output: 3.20A @ 24V; 1.20A @ 75V; 0.85A @ 110V DC Low Output: 2.60A @ 24V; 0.85A @ 75V; 0.75A @ 110V DC

Non-Heated/Heater Off:

High Output: 2.10A @ 24V; 0.75A @ 75V; 0.55A @ 110V DC Low Output: 1.00A @ 24V; 0.45A @ 75V; 0.30A @ 110V DC

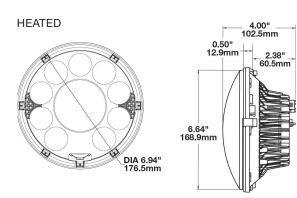
#### **Retrofit Information:**

7" Round Locomotive Headlight

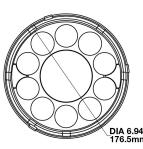
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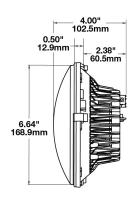










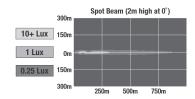


#### HEATED

PART #	DESCRIPTION
0551901	Locomotive Headlight with Spot

#### NON-HEATED

PART #	DESCRIPTION
0554601	Locomotive Headlight with Spot



## MODEL 217

PART #	BEZEL	DESCRIPTION
0345421	Red	Backuplight w/o bracket
0345451	White	DRL & FP w/o bracket
0345461	White	DRL & FP with 90mm bracket
0345411	Red	Stop & Tail w/o bracket
0345521	Amber	Turnlight with bracket
034441	Amber	Turnlight w/o bracket

#### Description:

12-24V SAE/ECE LED Signal Light without 90mm Mounting Assembly Adapter

### Operating Voltage:

9-30V DC

### Current Draw: 0.12A @ 12V DC

0.07A @ 24V DC

#### Standards:



### MODEL 272

PART #	BEZEL	DESCRIPTION
0341811	Red	12V Stop & Tail light
0341801	Amber	12V Turn Signal Light
0345461	Amber	24V Turn Signal Light

#### Description:

12-24V SAE/ECE LED Signal Light

#### Operating Voltage:

9-30V DC

#### **Current Draw:**

0.16A @ 12V DC 0.07A @ 24V DC

#### Standards:







### MODEL 150

PART #	BEZEL	DESCRIPTION
0205321	Red	Marker light with assembly
0205341	White	Marker light with assembly
0443051	Amber	Marker light with assembly

#### Description:

LED side Marker inserts

#### Operating Voltage:

12-24V DC

#### **Current Draw:**

0.090 (Max)A @ 12V DC







### LED SIGNALLING BULBS



### **HEADLIGHT BULBS**

#### Description:

Model 4000 series is 180% brighter than a standard halogen bulb

#### Operating Voltage:

12-24V DC

#### Lumen:

2000 per bulb

#### Color temp:

6000K

#### Note:

- Other base on request
- Not Appoved for ECE, DOT or ADR

PART #	BASE	DESCRIPTION
990001	H1	LED Bulb kit reflector optimeised
990003	НЗ	LED Bulb kit reflector optimeised
990004	H4	LED Bulb kit reflector optimeised
990007	H7	LED Bulb kit reflector optimeised
990007P	H7	LED Bulb kit Projector optimeised





#### Description:

Bayonet replacement bulbs

#### Operating Voltage:

12-24V DC

Not Appoved for ECE, DOT or **ADR** 

### **BAYONET BULBS**

PART #	COLOR	DESCRIPTION
990144	Red	BAY15D 12-24V 120/60lm
990142	Amber	BAU15S 12-24V 250lm
990140	White	BA15S 12-24V 360lm
990145	White	BA15S 12-24V 280lm
990147	White	BA9S 12V 68lm
990148	White	BA9S 24V 68lm



#### Description:

Festoon replacement bulbs

#### Operating Voltage:

12-24V DC

#### Note:

Not Appoved for ECE, DOT or ADR

### **FESTOON**

PART #	BASE	DESCRIPTION
990100	SV8.5	12V 30 X 10.5
990102	SV8.5	12V 36 X 10.5
990103	SV8.5	24V 36 X 10.5
990104	SV8.5	12V 41 X 10.5



#### Description:

Festoon replacement bulbs

#### Operating Voltage:

12-24V DC

Not Appoved for ECE, DOT or **ADR** 

### WEDGE BASED

PART #	BASE	DESCRIPTION
990110	T10	12V White 6000K 65lm
990111	T10	24V White 6000K 65Im
990120	T16	12/24V White 6000K 350lm
990122	T16	12/24V Amber 250lm
990124	T20	12/24V White 6000K 360lm
990130	S8	12/24V White 6000K 350/120lm
990132	S8	12/24V White 6000K 253/88lm

### SAFETY LIGHTS



### MODEL 793

PART #	BEZEL	DESCRIPTION
1603631	Red	Stripe zone light
1603641	Blue	Stripe zone light
1603651	Amber	2Stripe zone light

#### Description:

6" x 2" LED Warning Light

#### Operating Voltage:

10-36V DC

#### **Current Draw:**

1.60A @ 12V DC 0.60A @ 24V DC 0.57A @ 36V DC

Standards:





### MODEL 770

PART #	BEZEL	DESCRIPTION
1706311	Blue	LED blue safety spot
1706441	Red	LED red safety spot

#### Description:

LED side Marker inserts

#### Operating Voltage:

12-110V DC

#### **Current Draw:**

0.50A @ 12V DC 0.12A @ 60V DC 0.08A @ 110V DC







### WHY CHOOSE J.W. SPEAKER LIGHTS?



#### **EXPERIENCED, TRUSTED SERVICE**

J.W. Speaker has been serving vehicular markets since 1935. We have been a trusted provider for the U.S. Military since the 1940's and a manufacturer of engineered lighting solutions since the 1950's. Our portfolio of customers includes household names such as Harley-Davidson, Arctic Cat, John Deere, and McLaren. These organizations, and many more, choose J.W. Speaker because of our experience, our nearly 80 year track record for innovation, and our dedication to quality and service.

#### A LEADER IN LIGHTING TECHNOLOGY

J.W. Speaker is at the forefront of lighting technology. We know how important it is to stay ahead of the curve, which is why we invest in researching and developing new technologies.

There are thousands of LED lights in the marketplace, but few, if any, achieve the level of performance that comes standard with J.W. Speaker lights. The photo below is a side-by-side comparison of two DOT-approved LED headlights. Our LED headlight is on the left, and a competitor's LED headlight is on the right.

The J.W. Speaker headlight has been specifically engineered to provide more light in the areas where it is needed most. A new addition to our lineup of LED worklights is the XD Series. The XD Series uses a unique thermaly-conuctive polycarbonate housing which enables the lights to function in extreme heat without sacrificing output or durability.



Halogen vs LED

#### THE BEST WARRANTY IN THE MARKET

J.W. Speaker currently offers the best LED product warranty in the industry. While other companies boast their own Lifetime Limited Warranties, the fine print reveals exclusions like "not for use in mining, construction, or other rugged applications." Our products are designed, manufactured, and tested to work in those very applications, and we feel that it is important to have a warranty that backs that up.

J.W. Speaker guarantees the highest quality products for our end-users. We are certified by various international government agencies that issue quality and safety requirements for our products, as well as the processes used to make them. To confirm that we meet their requirements, the agencies perform regular on-site audits of our factories. Their certification guarantees we have world-class techniques and methods for making high-quality products.

### INTERIOR LIGHTING





# Rail Compliant T8 & T5 LED Tube

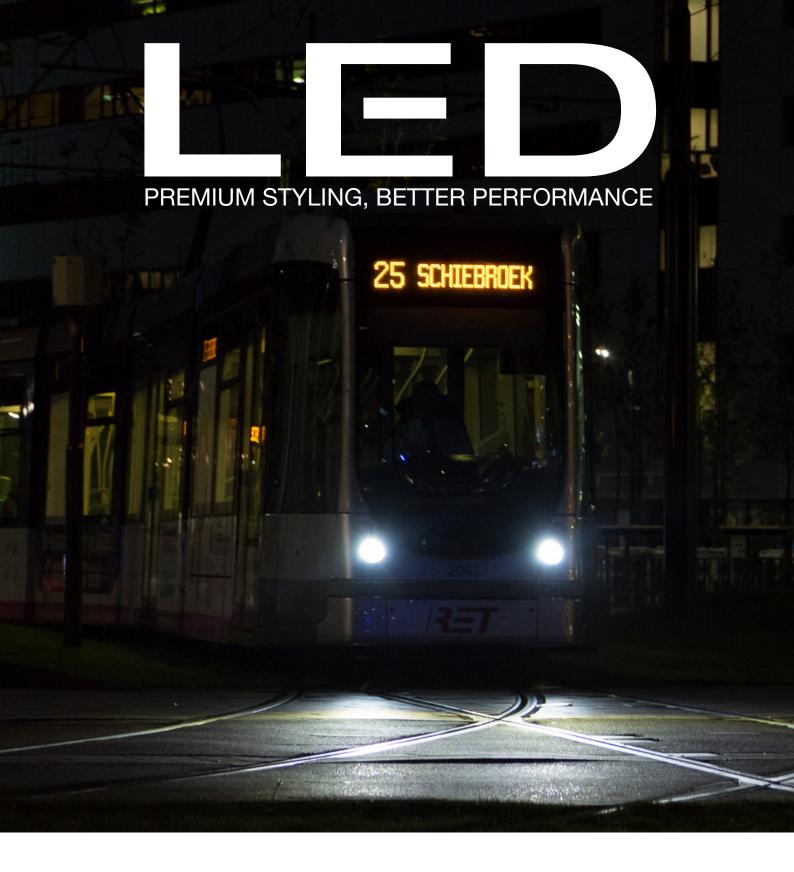
- Fully compliant to rail standards: EN 45545, EN 61373, EN 50121-3-2, EN50155, LUL RIA12, EN60081
- Adjustable end caps for LED tube orientation
- Flicker free with instant start
- High reliability LED and driver technology (110,000 hours MTBF)
- Zero maintenance cost: 65,000 hours lumen maintenance (to 70% initial light output)
- No mercury content
- No UV emission (no yellowing effect of diffuser)
- Colour rendering index >80 for a more pleasant passenger environment
- 50% energy saving
- DC input voltage reversal (Non destructive)
- Input transient and under voltage protection
- Built in multiple LED circuit redundancy
- Protected against power supply interruptions (EN50155 Class S2 and C2)
- 3 years warranty



OUR PARTNERS FOR INTERIOR LIGHTING









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