



Street lighting solutions

Designing your lighting solutions

SUNMAO LED Street Light

2020





SUNMAO LED Street Light

Energy efficiency through
innovative design.

01	Key Features	4
02	Advantages & Applications	6
03	Housing & Installation	8
04	Model variants & Technical details	10
05	Lighting performance & Distribution	12
06	Protection ratings & Specifications	14

01 Key Features

The unique programmable driver makes the Smart City Ready feature respond effortlessly to all your changing lighting needs.

Overview



Detail



01 LED Power Supply

- A variety of drivers are available.
- 5-7 years warranty



02 Wireless control system

- To establish smart city operation, energy conservation and environmental protection.



03 Photocell / NEMA 3/5/7 PIN

- Lamp will automatically turn on and off according to lux difference.
- NEMA 3/5/7 PIN available



04 Modular LED lens design

- Optional light distribution curve available with optics Type I M, Type II M, Type III (S/M).
- High efficiency LED Type source.



05 Imported Breather

- Lamp breather ensures air balance inside and outside of the luminaire which improves the street lights' service life.



06 10kV Surge Protection Device

- Extends the lifetime of the product while also protecting the driver and the luminaire from lightnings.
- CLASS I

02 Advantages & Applications

An optimised and fully certified LED lighting solution that provides a cost effective and fast return on investment.

Advantages

- 01 Tempered glass with 94% light transmittance
- 02 High intensity marine grade, die-cast aluminium body with an IK08 impact grade and tempered glass cover rated IK08.
- 03 High product reliability by applying 13 steps painting process.
- 04 High efficiency coating. Paint and metal parts successfully passed the 500 hours salt spray test.
- 05 Modular optical lens design, easy to upgrade in the future.
- 06 Detachable design and use of fast turn off power protector render this luminaire convenient and safe for maintenance.
- 06 10kV Surge Protection Device included & 20kV Surge Protection Device optional.
- 07 Available with Electrical Protection Class I
- 08 Cost-effective and efficient lighting solution for a fast return of investment.
- 09 5 sizes for flexibility
- 10 Easy installation and maintenance
- 11 Programmable Drivers - Smart-ready
- 12 ENEC CLASS I

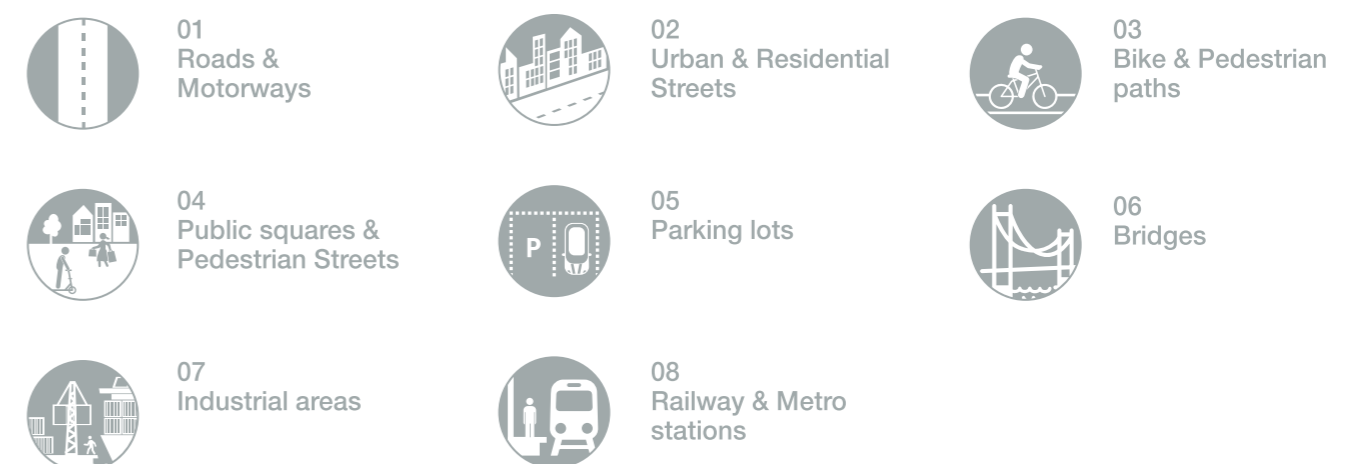
Characteristics

- | | |
|---|---|
| <ol style="list-style-type: none"> 01 Power consumption 02 Typical Luminaire output flux 03 Colour temperature 04 CRI 05 LED Chip 06 Nominal voltage 07 Driver Brand 08 Surge Protection 09 Smart Control Options 10 Product IP Class 11 Material 12 Housing Colour 13 Installation options 14 Recommended Installation Height 15 Operating temperature 16 Optics | <p>12500Lm-60000Lm
2200K - 6500K
CRI70, CRI80 available on request
LUMILEDS 3030 / 5050
AC100-277V, 50/60Hz
Inventronics (IP67)
10kV
Wireless Control System/ Photocell/Dimming
IP66
Die cast aluminium & Tempered glass
Black / Grey / Other colours available on request
Vertical Pole / Horizontal Pole
4m - 20m
-40°C ~ +50°C
Type I M, Type II M, Type III S/M</p> |
|---|---|

Certificates



Applications



03 Housing & Installation

The unique ergonomic housing design enables easy on-site maintenance and installation. The die cast aluminium housing protects the interior components and ensures longevity and durability in demanding conditions.

Housing



01 PC optical lens module

- Special optic lenses provide light uniformity which optimizes the lamp's light distribution and efficiency
- Anti-aging
- Anti-ultraviolet radiation
- 142° C High temperature resistance
- 110° C Low temperature resistance

02 Double lamp body protection

- Super Toughened glass
- Toughened 3N/cm
- Surface stress resistance $\geq 87\text{Mpa}$
- Internal parts
- Anti-aging ability

03 Al-Si-Cu Alloy Die Casting Housing

- Tensile strength reaches 288.3N/mm^2
- Impact level up to IK08
- IEC 62262;2002
- Protection level of outer shell for external mechanical collision
- Stainless steel screws
- Structure allows air flow through heat sink for optimum heat management

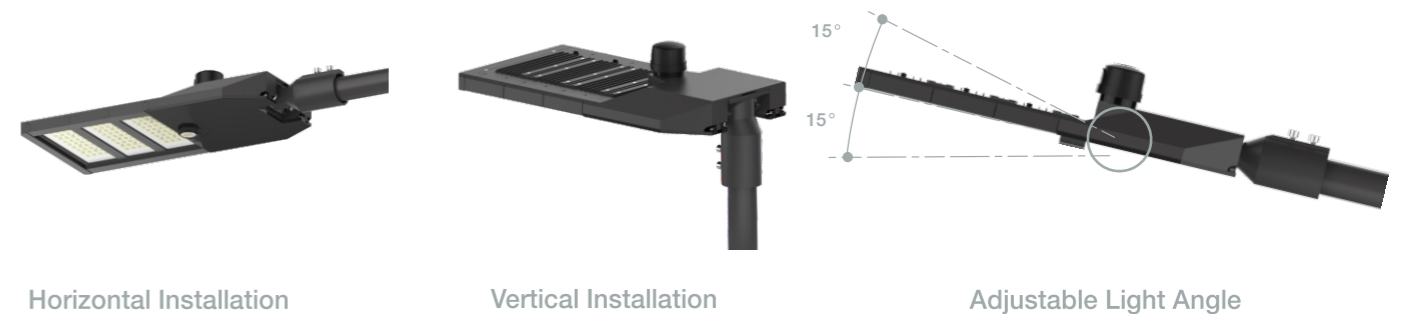
Clip-on design

Clip-on design, makes lamp easy to install, maintain and replace.



Installation

The adjustable bracket allows horizontal or vertical installation.



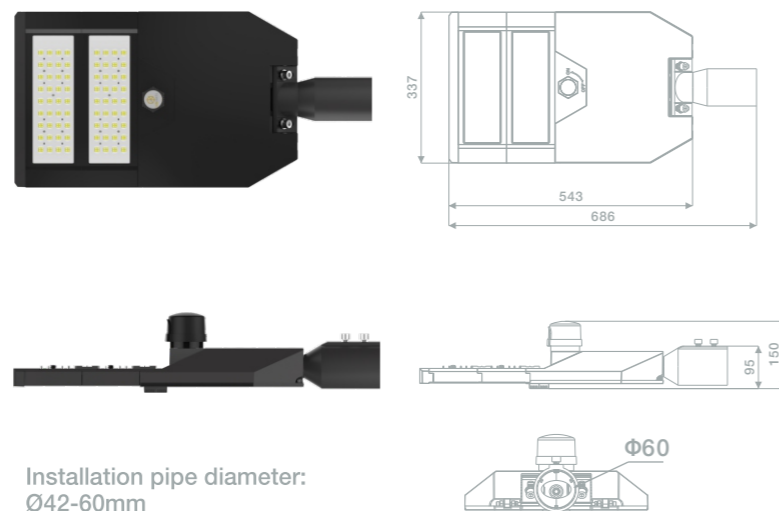
04 Model variants & Technical details

A complete and versatile range of lighting solutions for all road conditions.

B Model 100W/ 120W/ 150W

288 LED pieces

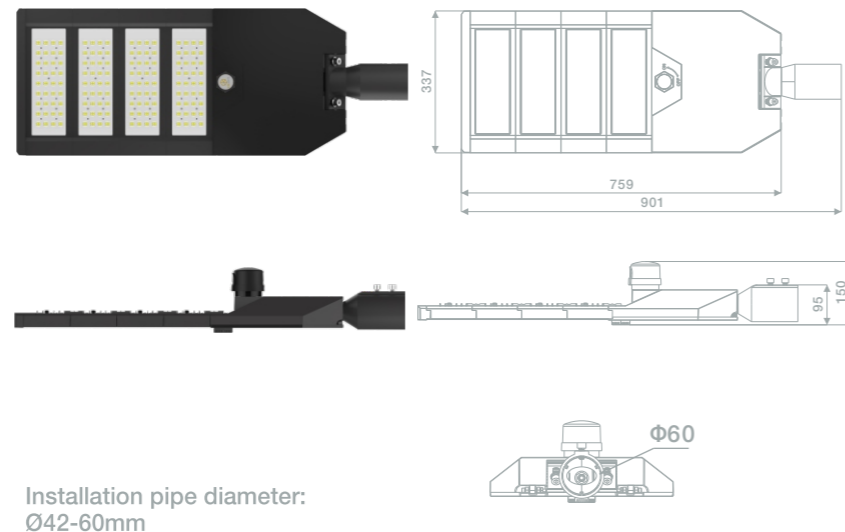
150 Lm/W



D Model 300W

576 LED pieces

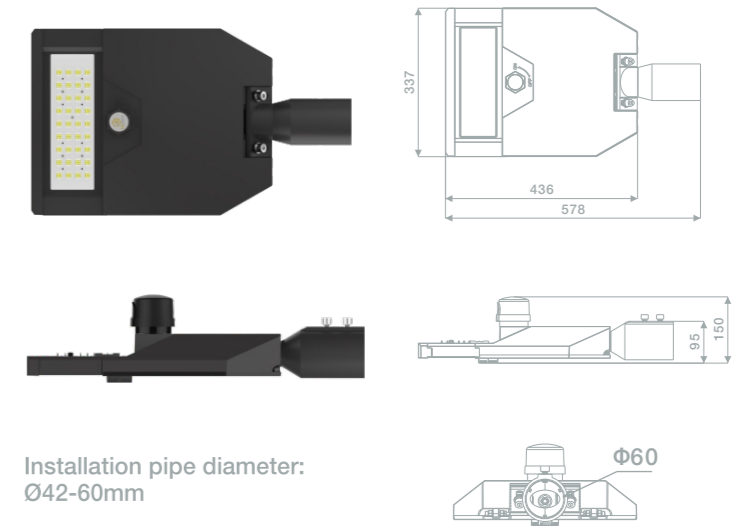
150 Lm/W



A Model 65W

144 LED pieces

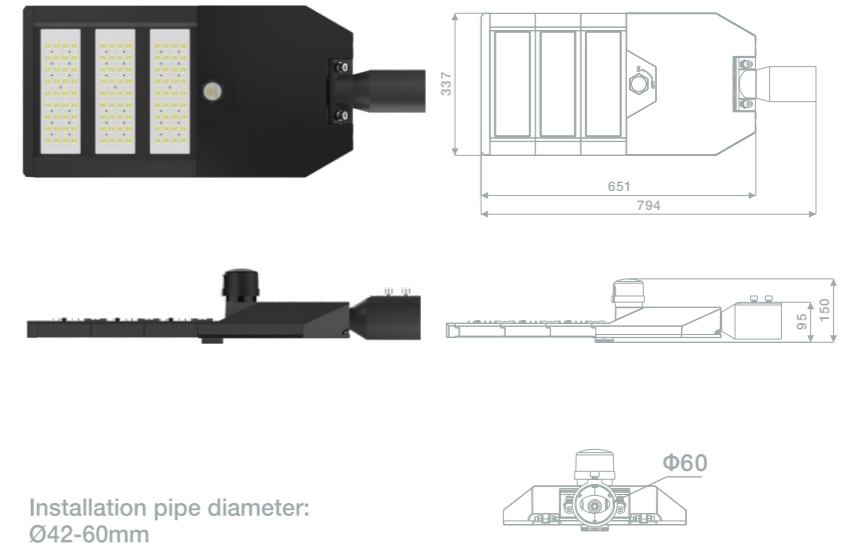
150 Lm/W



C Model 200W/ 250W

432 LED pieces

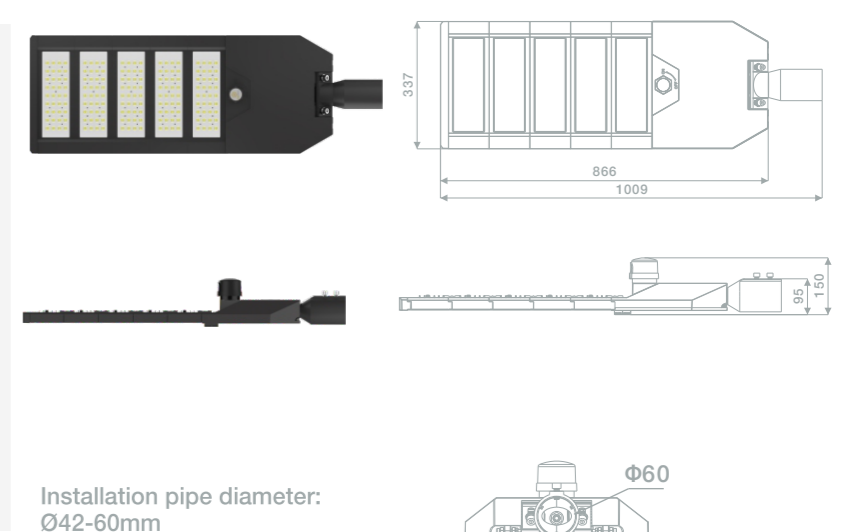
150 Lm/W



E Model 350W/ 400W

720 LED pieces

150 Lm/W

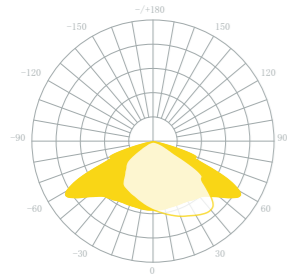


05 Light performance & Distribution

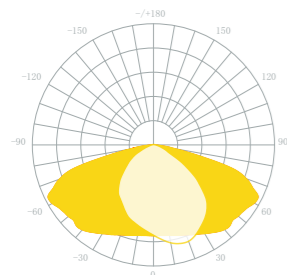
The Black Berry LED street light solution offers reliable optical performance and durability for efficient light coverage in the most demanding situations.

Light Distribution Diagram

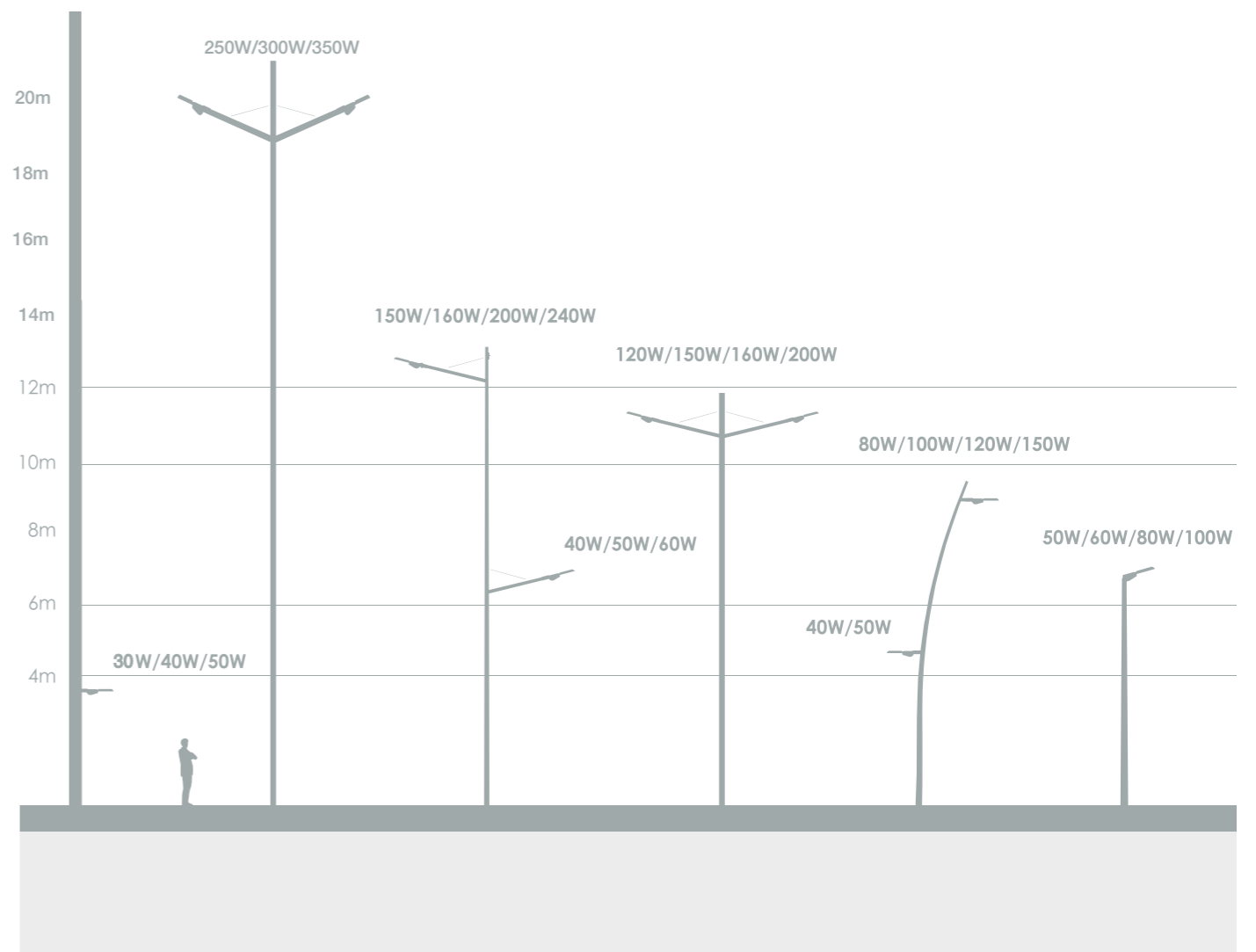
Type II-S



Type III-S



Pole Selection



06 Protection ratings & Specifications

Specifications - CLASS I

Model	Wattage	LED Brand	LED pcs	LPW	Luminous flux	Input Voltage	Driver	Material	Pole Diameter	Cartonsize (MM)	G.W. (KG)
SL-JL09-65W	65W/A	LUMILEDS	144	150Lm/W	11250Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	660x420x200/1CTN 660x420x310/2CTN	8 13.8
SL-JL09-100W	100W/B	LUMILEDS	288	150Lm/W	15000Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	770x420x200/1CTN 770x420x310/2CTN	9.8 17
SL-JL09-120W	120W/B	LUMILEDS	288	150Lm/W	18000Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	770x420x200/1CTN 770x420x310/2CTN	10 17
SL-JL09-150W	150W/B	LUMILEDS	288	150Lm/W	22500Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	770x420x200/1CTN 770x420x310/2CTN	10 17
SL-JL09-200W	200W/C	LUMILEDS	432	150Lm/W	30000Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	880x420x200/1CTN 880x420x310/2CTN	11.6 21
SL-JL09-250W	250W/C	LUMILEDS	432	150Lm/W	37500Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	880x420x200/1CTN 880x420x310/2CTN	12.5 21
SL-JL09-300W	300W/D	LUMILEDS	576	150Lm/W	45000Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	990x420x200/1CTN 990x420x310/2CTN	14.3 24.6
SL-JL09-350W	350W/E	LUMILEDS	720	150Lm/W	52500Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	1090x420x200/1CTN 1100x420x310/2CTN	16.4 29
SL-JL09-400W	400W/E	LUMILEDS	720	150Lm/W	60000Lm	100-277V	Inventronics	ADC12/ PC/ Toughened Glass	Φ42-60mm	1090x420x200/1CTN 1100x420x310/2CTN	16.4 29.2

- Inventronics Driver Warranty 5 yrs and 7yrs
- CR180 available on request and price change

- Standard Pre-cabling 0.3m and longer available on request and subject to price change
- Standard colour Black and Grey and other colours available on request and subject to price change

Safety and symbols key



Certification mark
Indicates conformity with health, safety, and environmental Protection standards for products sold within the European Economic Area (EEA)

RoHS

Restriction of Hazardous Substances
The Restriction of Hazardous Substances Directive 2002/95/EC bans placement into the EU market of new electrical and electronic equipment containing more than the designated maximum allowable levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.



Electromagnetic compatibility (EMC)
Measures the ability of equipment or systems to function satisfactorily in their electromagnetic environment without introducing intolerable electromagnetic disturbance to anything in that environment.



ENEC (European Norms Electrical Certification)
A certification scheme under CENELEC, accepted throughout Europe. The ENEC Mark for electrical products demonstrates compliance with European safety standards.

WEEE

The European Waste Electrical and Electronic Equipment (WEEE)
The European Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC, as amended by 2003/108/EC, encourages the collection, treatment, recycling and recovery of waste electrical and electronic equipment.



REACH Certificate
REACH Certificate of Compliance certifies that a product is compliant with the EU REACH regulation (EC) No 1907/2006, regarding the environmental and human health protection from risks posed by chemical substances.

Standardized documents

ISTMT

ISTMT is the measurement of the LED source case temperature within the LED system (luminaire or lamp) while it is operating in its designed position and/or environment (In "Situation"). The measurement is performed at the temperature measurement point (Tc Point) indicated by the LED package manufacturer.

TM21

TM21 is the IESNA approved method for taking LM-80 data and making useful LED lifetime projections. The standards apply to lifetime projection of LED package, array or module alone. The results can then be used to interpolate the lifetime of an LED source within a system (luminaire or integrated lamp) using the in-situ LED source case temperature.

LM80

14000hrs

LM80 is the IESNA approved standard for measuring lumen maintenance of LED light sources. LM-80-08 apply to the LED package, array, or module alone, not a complete system, it is testing a component level. The standard does not provide guidance for extrapolation of testing results.

LM82

LM82 is the IESNA Approved Method for the Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature (LM-82-12) is a document which addresses the changes in photometric performance of SSL light engines and lamps with changes in temperature.

500hrs

Salt Spray Test

Salt Spray Test is used to test the relative resistance to corrosion of protective coatings, when exposed to a salt mist (spray) climate at an elevated temperature. Test specimens are placed in an enclosed chamber and exposed to a continuous indirect spray of neutral (pH 6.5 to 7.2) salt water solution, which falls-out on to the specimens at a rate of 1.0 to 2.0ml/80cm²/hour, in a chamber temperature of +35C. This climate is maintained under constant steady state conditions.

IEC62722

IEC 62722 covers specific performance and environmental requirements for luminaires, incorporating electric light sources for operation from supply voltages up to 1000 V. Unless otherwise detailed, performance data covered under the scope of this standard are for the luminaires in a condition representative of new manufacture, with any specified initial aging procedures completed in a chamber temperature of +35C. This climate is maintained under constant steady state conditions.

Ingress protection rating

Rating Example

IP | 66
Ingress protection | Against Solids

The first number identifies the ingress protection rating against solids

- 1 For solid bodies with dimensions > 50mm
- 2 For solid bodies with dimensions > 12.5mm
- 3 For solid bodies with dimensions > 2.5mm
- 4 For solid bodies with dimensions > 1mm
- 5 Dust protected
- 6 Dust tight

The second number identifies the ingress protection rating against liquids

- 1 For vertically falling drops
- 2 For vertically falling drops when enclosure is tilted up to 15° vertically
- 3 For water sprayed at an angle up to 60° vertically
- 4 For water splashed in any direction
- 5 For water projected in jets against the enclosure from any direction
- 6 For water projected in powerful jets against the enclosure from any direction
- 7 For enclosure's temporary immersion at 1 meter in the water, under defined conditions
- 8 For enclosure's continuous immersion in the water, under more severe conditions to those of number 7

Impact protection rating

Rating Example

IK | 08
Impact protection | Mechanical Impact level

The number identifies the impact protection rating

- 00 No protection
- 01-05 For tiny impact of < 1 Joule
- 06 For impact of 1 Joule
- 07 For impact of 2 Joule
- 08 For impact of 5 Joule
- 09 For impact of 10 Joule
- 10 For impact of 20 Joule