aura
CLEAN ENERGY

# ISL SOLAR STREET LIGHT
## 20W-100W

# > Features of SL Series

Outdoor solar lighting systems use solar cells which convert sunlight into electricity. Electricity is stored in batteries for use at night. Using them won’ t increase your electric bill.

• SL Solar LED Street Light features a typical street light that is powered by solar energy, low profile design, with photocell sensor , timing, dimming, intelligent power saving, morning light, microwave sensor available.

• Deep cycle battery, charge and discharge over 2000 times.

• Continuously work 2-3 rainy days in intelligent mode.

• Die-cast aluminum fixture housing ;

• UV stabilized polyester powder paint finish for durability and corrosion resistance;

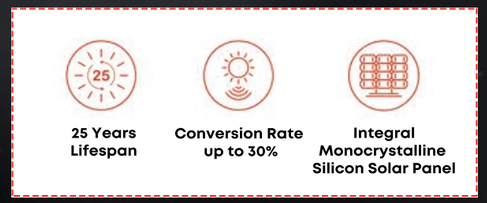
• Mounting options: slide entry installation;

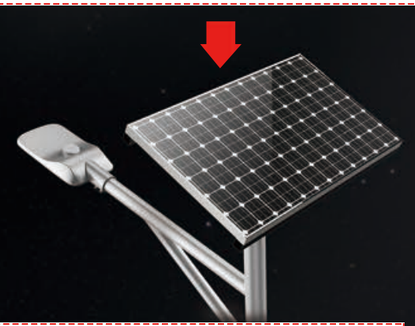
• Streamlined design to reduce wind resistance;

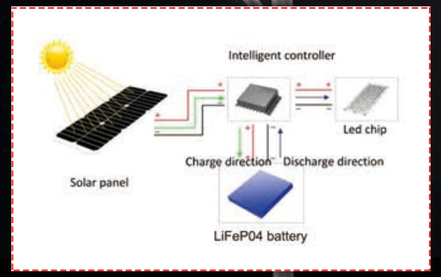
• Reserved sensor location for easy installation;

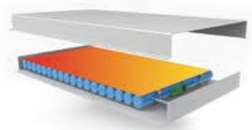
• Powdering / PC + Tempered glass cover.


## Solar Panel Intergreted wiht Battery Box





Lifespan Cycle ≥2000 Times
Intelligent Temperature Control


Adjustabel Bracket Aim to the Direction of Sunlight

*Due to the constant improvements in product development, individual parameters might change. Please refer to our sales or R&D team for most up-to-date content as specifications are subject to change without notice.

# > Photometrics Design

## Lumen efficiency >177lm/W achieve higher illumination

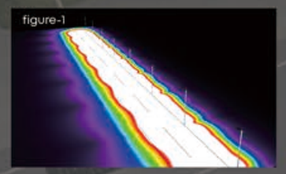
High Efficiency

Long Lifespan

Less Calorific Value

Low Light Decay


Lumileds 3030/5050 LED chip creates a first-class light source. By choosing it, single lumen efficacy >177lm/W, with the aluminum lamp base and sealed lens, with its excellent heat dissipation, it is as if the LED chip has been placed in a sealed unit. Thus it maintains high brightness levels with very little fading. The sealed lenses are made of strong UV-protected PC and are aging and shock-resistant; The well-optimized light distribution makes for a more uniform and wider lighting area.



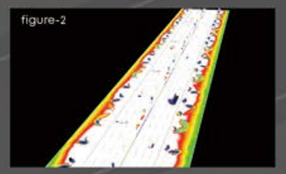
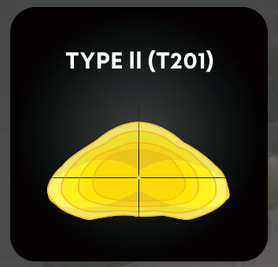
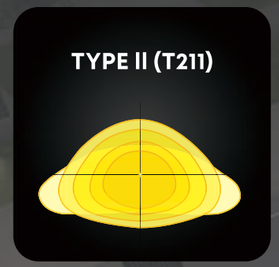




Figure-1: Example of rural branch road
Figure-2: Example of mian road or avenue

Planning and analysis of street lights can be done by using lighting simulation & design software, which allows the lighting effect a more intuitive display. It uses rendering, the process of generating an image from a model, by means of computer programs resulting in different tools for measuring the simulated light levels.

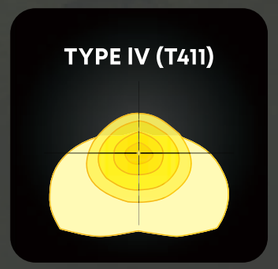
## Distribution





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# > Application Reference

- Road lighting
- Area lighting
- Perimeter lighting

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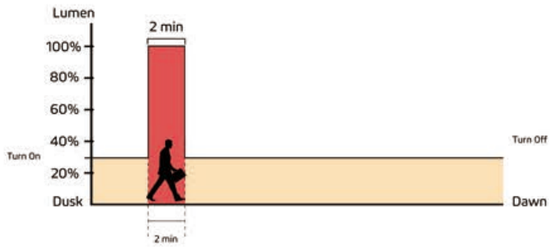
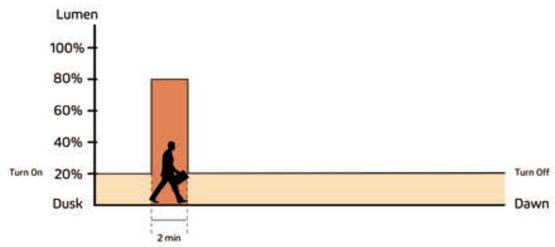
# > Smart City Starts with Smart Lighting

## AUTONOMY CONTROL REFERENCE

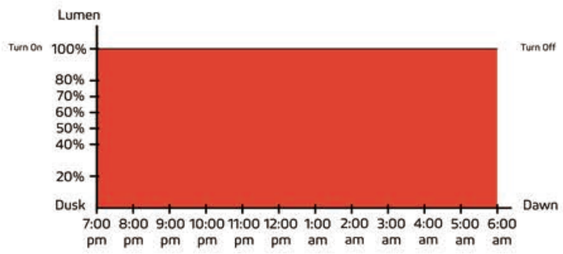
30%~100% MOTION SENSOR MODE
Constant 30% brightness (turns on at dusk, turns off at dawn);
100% brightness turns on for 2 minutes when motion is



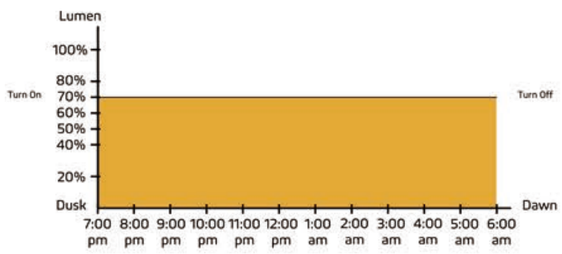

20%~80% MOTION SENSOR MODE
Constant 20% brightness (turns on at dusk, turns off at dawn);
80% brightness turns on for 2 minutes when motion is



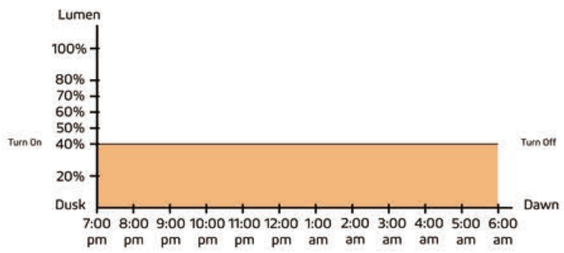

100% CONSTANT MODE
100% brightness from dusk to dawn.



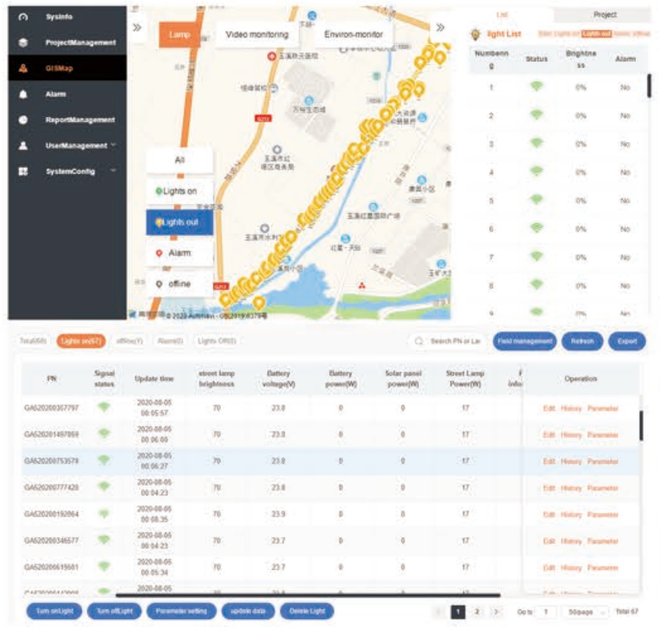

70% CONSTANT MODE
70% brightness from dusk to dawn.




40% CONSTANT MODE
40% brightness from dusk to dawn.




## SMART LIGHTING CONTROL SYSTEM




## DATA & PROJECT MANAGEMENT


· The Internet of Things solar street light management system can pre-set one or more lighting modes according to the different time of day and traffic flow, automatically turn on or off any light, and adjust the switching time and illumination according to environmental requirements to achieve the purpose of energy-saving and consumption reduction.
· The integrated system is mainly composed of a street light component a centralized controller, a single light controller, and a smart cloud platform. The centralized controller and the single light controller aggregate the data collected by the single light via the GPRS/NB-IoT wireless communication network. The centralized controller uploads data to the system cloud platform through GPRS data flow, providing data dependence for mobile phone and computer terminal access.

## APP CONTROL

**Remote monitoring real time monitoring**

With wireless communication function, through the intelligent management system of solar street light and wireless module, have remote monitoring and real-time monitoring.

**Automatic fault alarm**

Real-time monitoring of solar panel voltage, current, power, battery charging and discharging current, voltage, load working state, controller working state data, and fault automatic alarm.

**Remote control**

Support remote switch on/off dimmer and battery, load parameter modification.

**Fault tracking and precise positioning**

Multi peak PWM technology, suitable for partial shading or damage of photovoltaic cells, and the tracking efficiency is more than 99%.

**Map location**

Using GPS maps, with geographic display capabilities.

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# > Application of Typical Networking of Smart Street Light

## Strategy Control

By installing the node of the street light controller on the ambient light sensor, electric energy metering unit to collect to the street light power (voltage, current, power), and the ambient light conditions, according to the administrator deployment strategy to mobilize installed on the street light controller of the automatic control system to control the street light switch, adjust brightness, color temperature adjustment, etc.;

## Gateway Control

The Lora Light wireless system with strong anti-interference ability is adopted in the wireless transmission unit of the street light controller to realize the communication between nodes and gateways. The data of various sensors on the node street lamp controller is sent back to the gateway, and the control command of the gateway is also sent to the node street light controller.

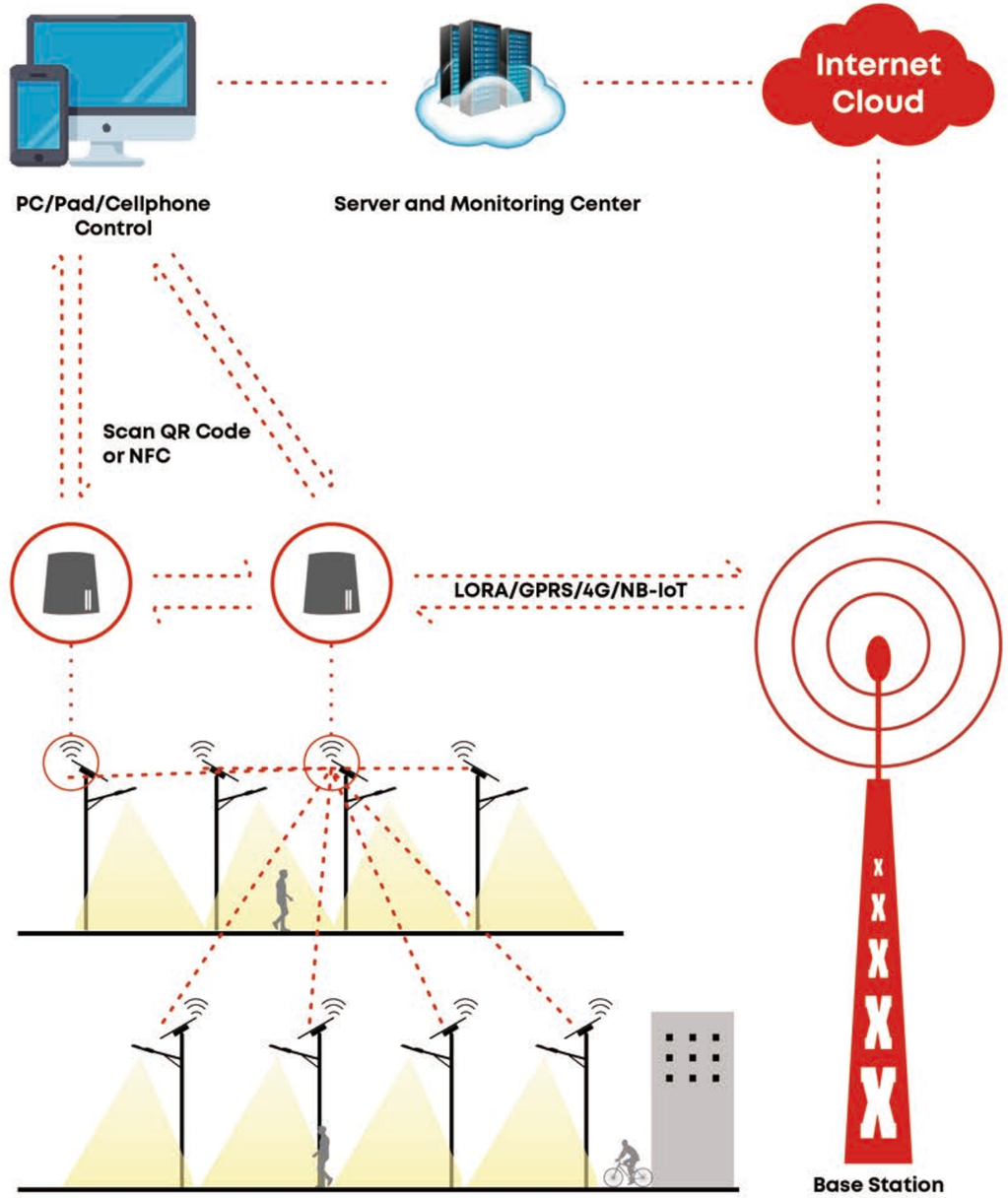
## Cloud Platform

The gateway controller transmits the street light control information of all nodes under the gateway to the cloud platform through GPRS/3G/4G/NBIOT (optional) wireless mode, and at the same time sends the instructions of the cloud platform to the street light controller of each node.

## Controller GPRS/NB-IoT Inside


- Built-in IoT module (GPRS/ NB-IOT)
- Adopt Moving Track MPPT maximum power tracking technology, with higher tracking efficiency and faster speed;
- Lead-acid battery and lithium battery are universal. Operating parameters can be set by remote controller;
- Ultra green power control technology with extremely low static power consumption and dormant current;
- Lead acid battery multi-stage temperature compensated constant voltage charging;
- 10 Programmable load power/time control setting;
- Battery charging and discharging high and low temperature protection function, working temperature can be set;
- A variety of intelligent modes can be selected, automatically adjust the load power according to the battery power;
- High precision digital booster constant-current control algorithm, high efficiency and high constant-current precision;
- 2.4G wireless communication, can set read parameters, read status, etc;
- Battery/PV reverse connection protection, LED short circuit/open circuit/limited power protection and other multiple protection functions.

**APPLICATION OF TYPICAL IOT NETWORKING**

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# Parameter Table

## Electrical Data

| Model | | 20WsL | 40WsL | 60WsL | 80WsL | 100WsL |
|---|---|---|---|---|---|---|
| Power | | 20W | 40W | 60W | 80W | 100W |
| Input voltage | | 12-24V DC | | | | |
| Control Option | | Photocell sensor, timing, dimming, intelligent power saving, microwave sensor. LoRa, NB-IoT Smart Lighting Control | | | | |
| Driver brand | | Meanwell | | | | |
| Surge Protection | | 4kV optional | | | | |

## Photometric Data

| | | | | | | |
|---|---|---|---|---|---|---|
| LED Manufacturer | | LUMILEDS | | | | |
| LED model | | Lumileds 3030/Lumileds 5050 | | | | |
| Lens | | Polycarbonate | | | | |
| Luminous flux(lm, Std. Dev. ±3%) | 3030 | 3520lm | 6640lm | 10020lm | 13360m | 16700lm |
| | 5050 | 3540lm | 6680lm | 10080lm | 13440lm | 16800lm |
| Efficacy(lm/W, Std. Dev. ±3%) | 3030 | 176lm/w | 166lm/w | 167lm/w | 167lm/w | 167lm/w |
| | 5050 | 177lm/w | 167lm/w | 168lm/w | 168lm/w | 168lm/w |
| ULOR | | = 0%, @ Luminaire inclination 0° | | | | |
| CCT | | 3000K, 4000K, 5000K, 5700K, 6500K | | | | |
| CRI | | 70Ra, 80Ra, 90Ra optional | | | | |
| Beam angle | | Type II/Type III/Type IV/Type V | | | | |

## Mechanical Data

| | | | | | |
|---|---|---|---|---|---|
| IP Rating | IP65, according to standard EN 60529 | | | | |
| SCx(Fixture) | Front: 0.014 ㎡; Side: 0.0214 ㎡ | | | Front: 0.0219 ㎡; Side: 0.035 ㎡ | |
| SCx (Solar Panel) | Front：0.45m²;<br>Front-side: 0.32m²;<br>Side: 0.08m²; | Front：0.71m²;<br>Front-side: 0.47m²;<br>Side: 0.09m²; | Front：1.14m²;<br>Front-side: 0.73m²;<br>Side: 0.09m²; | Front：1.59m²;<br>Front-side: 0.99m²;<br>Side: 0.12m²; | Front：1.59m²;<br>Front-side: 0.99m²;<br>Side: 0.12m²; |
| Housing | Heavy-duty die-cast aluminum (EN AC-46100) | | | | |
| Surface treatment | Anti-UV thermosetting polyester / 80 micron epoxy primer + Anti-UV thermosetting polyester (for extremely corrosive environments). | | | | |
| Painting | Silver gray, Custom request | | | | |
| Mounting | Slide entry (fixture) Post top(Solar panel) | | | | |

## Solar Panel Data

| | | | | | |
|---|---|---|---|---|---|
| Photovoltaic panel | Single crystal photovoltaic panel | | | | |
| Solar Panel | 18V/72W | 18V/130W | 36V/200W | 36V/280W | 36V/280W |
| Li-on Battery | 691.2WH | 1305.6WH | 1996.8WH | 2611.2WH | 2611.2WH |
| | 12.8V 54AH | 12.8V 102AH | 25.6V 78AH | 25.6V 102AH | 25.6V 102AH |
| Charing Time | 8hrs | | | | |
| Battery lifespan | >2000 times cycle | | | | |
| Run Time(@full power) | 30hrs | | | | |
| Working Temperature | -10°C to 50°C (-14°F to 122°F) | | | | |
| Charing Temperature | -0°C to 45°C (32°F to 113°F) | | | | |
| Control system | MPPT intelligent controller | | | | |
| Maximum Autonomy | Operate under 3-5 rainy days | | | | |

## Others

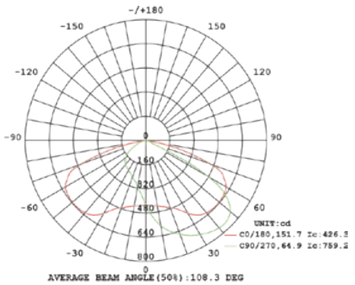
| | | | | | |
|---|---|---|---|---|---|
| Lifespan | L90B10 - 52 000 h, @Tq 25°C | | | | |
| Warranty | 3 years (Warranty extension up to 5 years on request) | | | | |
| Certification | CE RoHS (The company is ISO 9001 and ISO 14001 certified.) | | | | |
| Product Size (Solar panel) | 818*493*468mm | 1003*653*508mm | 1613*653*508mm | 1500*990*593mm | 1500*990*593mm |
| Net Weigh | 25.5kg | 35.5kg | 45.5kg | 73kg | 73kg |
| Carton Size | Fixture: 520*270*135mm<br>Box: 402*400*290mm<br>Panel: 898*573*125mm | Fixture: 520*270*135mm<br>Box: 620*400*290mm<br>Panel: 1083*733*125mm | Fixture: 520*270*135mm<br>Box: 691*400*290mm<br>Panel: 1693*733*125mm | Fixture: 825*360*200mm<br>Box: 1186*400*290mm<br>Panel: 1560*1050*125mm | Fixture: 825*360*200mm<br>Box: 1186*400*290mm<br>Panel: 1560*1050*125mm |
| Gross Weight | Fixture: 3kg<br>Box: 19kg<br>Panel: 8kg | Fixture: 3kg<br>Box: 25kg<br>Panel: 12kg | Fixture: 3kg<br>Box: 38kg<br>Panel: 16kg | Fixture: 8.1kg<br>Box: 46kg<br>Panel: 25kg | Fixture: 8.1kg<br>Box: 46kg<br>Panel: 25kg |
| Recommend installation height | 3-4M(10-13ft) | 5-6M(16-19ft) | 7-8M(22-26ft) | 9-10M(29-32ft) | 11-12M(36-39ft) |
| Application field | Urban and rural street | | | | |

# Ordering Information

| Aura Renewable Energy | | | | | | | |
|---|---|---|---|---|---|---|---|
| WATTS | VOLTAGE | LED CHIPS | TYPE OF SENSOR | CCT&CRI | DISTRIBUTION | MOUNT | OPTION |
| 20WsL | NV=12/24V DC | L3=LUMILEDS 3030 | 00=Without Sensor | 3070=3000K 70CRI | T2=TYPE II | A=Top Post | 4KV SPD |
| 40WsL | | L5=LUMILEDS 5050 | SN=Motion Sensor | 4070=4000K 70CRI | T3=TYPE III | | Intelligent Control |
| 60WsL | | | PH=Photocell | 5070=5000K 70CRI | T4=TYPE IV | | |
| 80WsL | | | DV=Dimmable | 5770=5700K 70CRI | T5=TYPE V | | |
| 100WsL | | | | 6570=6500K 70CRI | | | |
| | | | | 3080=3000K 80CRI | | | |
| | | | | 4080=4000K 80CRI | | | |
| | | | | 5080=5000K 80CRI | | | |
| | | | | 5780=5700K 80CRI | | | |
| | | | | 6580=6500K 80CRI | | | |

# Photometry

Type II

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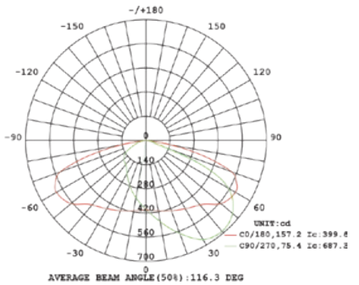


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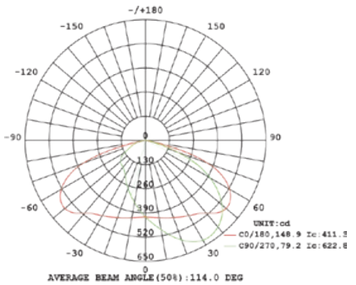
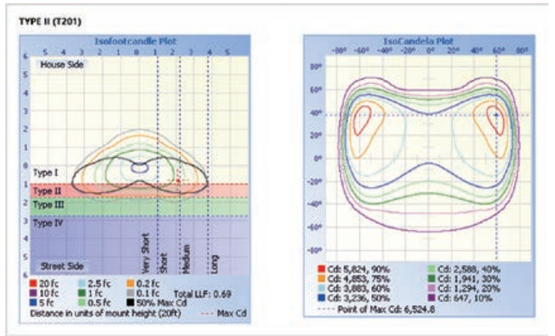
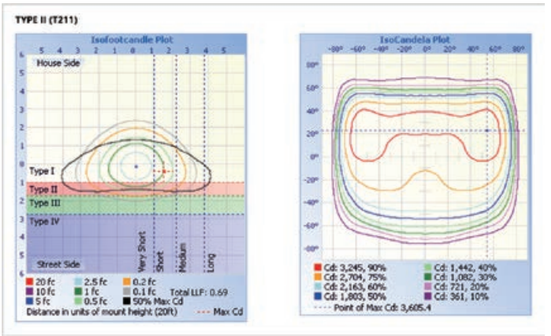



# Illuminance Diagram




## SL Series Specification Sheet

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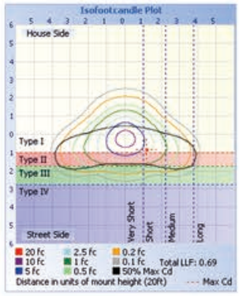
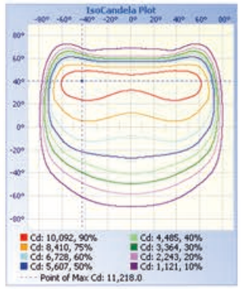
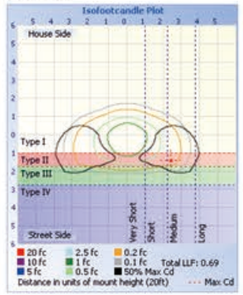
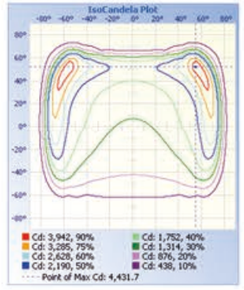
TYPE II (T221)




TYPE III (T301)

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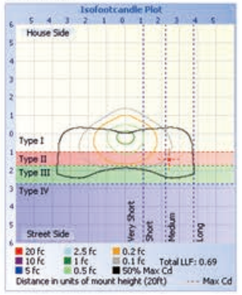


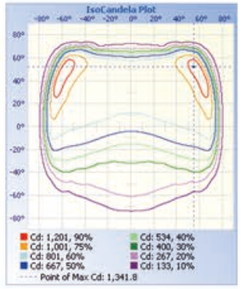


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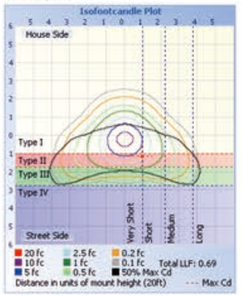
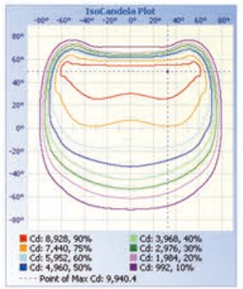
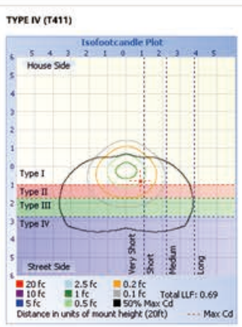
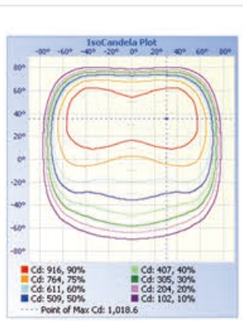


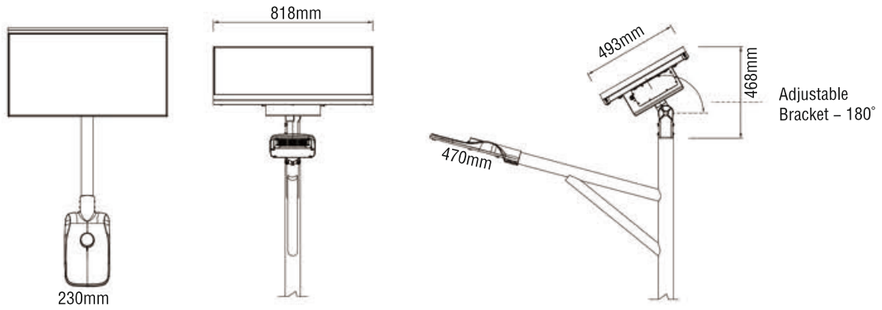

TYPE IV (T411)



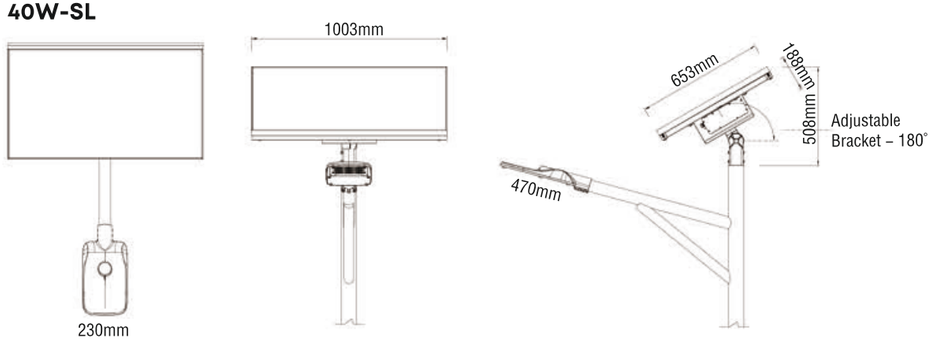




# Dimensions

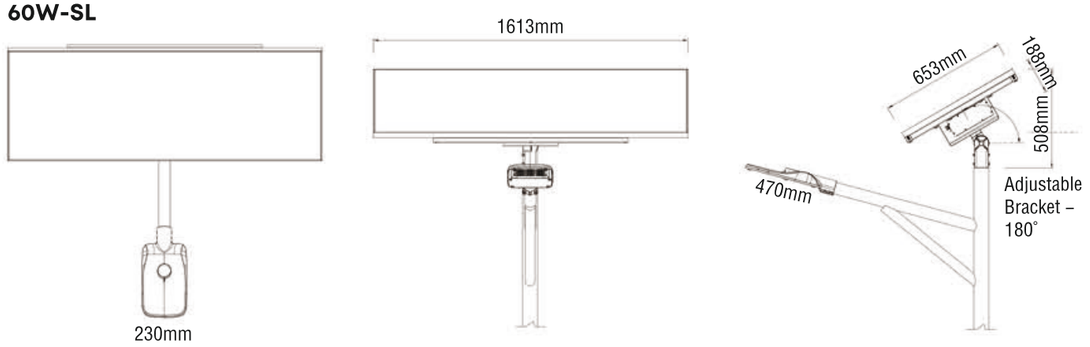
## 20W-SL



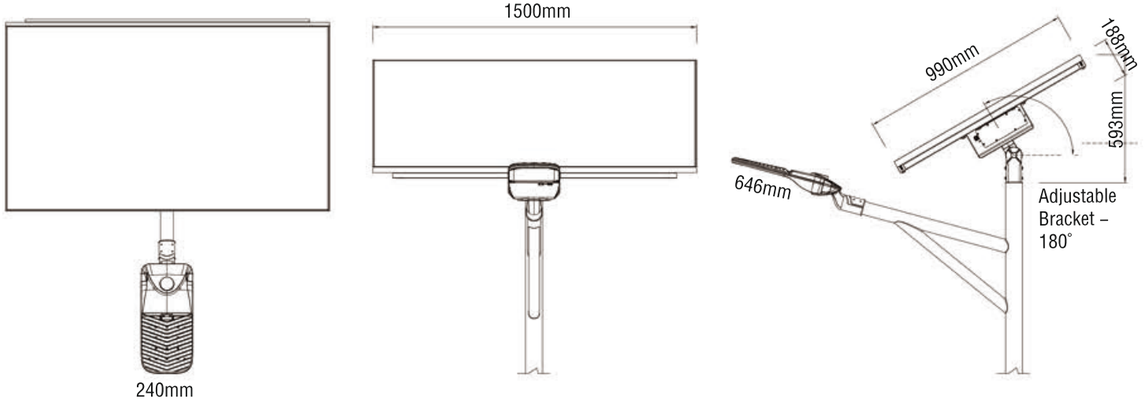

## 40W-SL




## 60W-SL




## 80W-100W-SL




# Accessories

Photocell

3 pin/7 pin receptacle

PIR sensor

Mobile
Bluetooth APP

4kv SPD

MPPT
GPRS/NB-IoT

*As the products are upgraded, the accessories may differ from those described in the pictures. Please consult with our sales team for updated details and order separately.



*Due to the constant improvements in product development, individual parameters might change. Please refer to our sales or R&D team for most up-to-date content as specifications are subject to change without notice.

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