



**SL** 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.

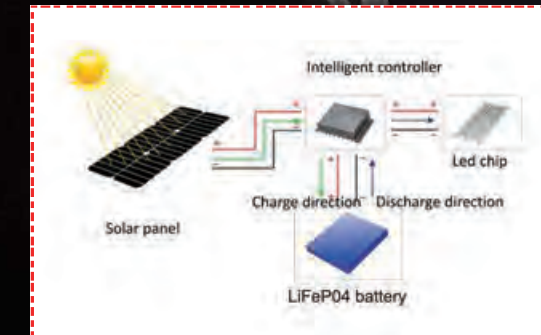
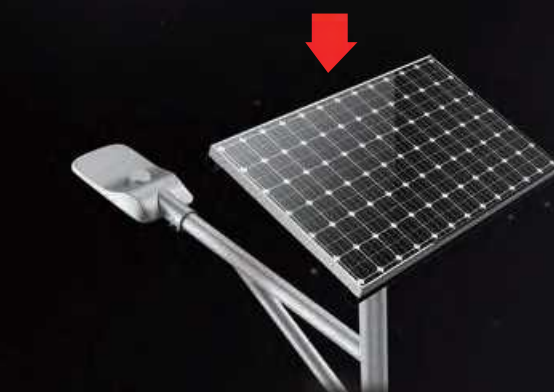
- SL Solar LED Street Light features a typical street light that is powered by solar energy, low profile design, with photocell sensor, timing, dimming, intelligent power saving, morning light, microwave sensor available.
- Deep cycle battery, charge and discharge over 2000 times.
- Continuously work 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.

<b>UP TO</b> <b>177</b> lm/W	<b>CRI</b> 70/80/90	<b>GPRS</b> <b>NB-IoT</b>	<b>IP65</b>	<b>L90B10</b> >52000hrs @ 25°C
- 3000K - 4000K - 5000K - 5700K - 6500K	Working Temperature <b>Environment</b> -10°C~50°C (-14°F~+122°F)	<b>DIM</b>	<b>SAFETY PROTECTION</b> <b>AUTO TURN-OFF</b>	



### Solar Panel Integrated with Battery Box

25 Years Lifespan	Conversion Rate up to 30%	Integral Monocrystalline Silicon Solar Panel



**Lifespan Cycle ≥2000 Times**  
**Intelligent Temperature Control**

**180°**  
**Adjustable Bracket Aim to the Direction of Sunlight**

# > 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.

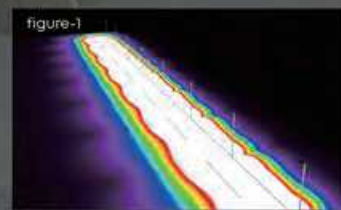


Figure-1: Example of rural branch road  
Figure-2: Example of main road or avenue

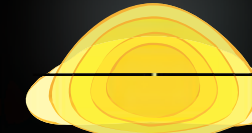
Planning and analysis of street lights can be done by using lighting simulation & design software, which allows the lighting effect a more intuitive display. It uses rendering, the process of generating an image from a model, by means of computer programs resulting in different tools for measuring the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

## Distribution

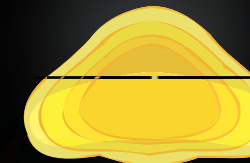
TYPE II (T201)



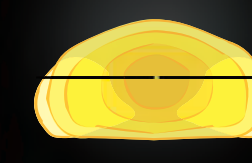
TYPE II (T211)



TYPE II (T221)



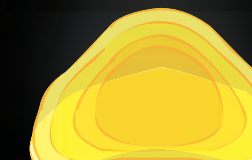
TYPE III (T301)



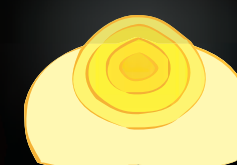
TYPE III (T311)



TYPE III (T321)



TYPE IV (T411)



## > Application Reference

- Road lighting
- Area lighting
- Perimeter lighting



# > Application Reference

- Road lighting
- Area lighting
- Perimeter lighting



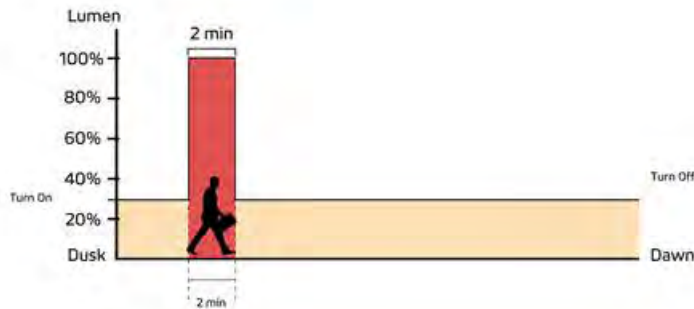
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# > Smart City Starts with Smart Lighting

## AUTONOMY CONTROL REFERENCE

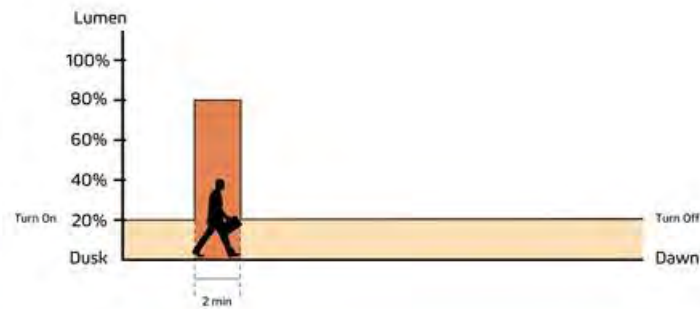
### 30%~100% MOTION SENSOR MODE

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



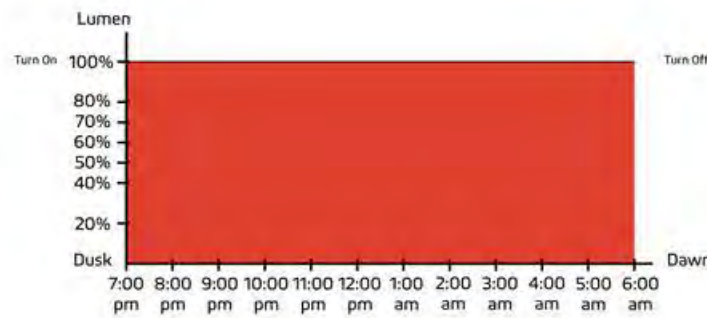
### 20%~80% MOTION SENSOR MODE

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



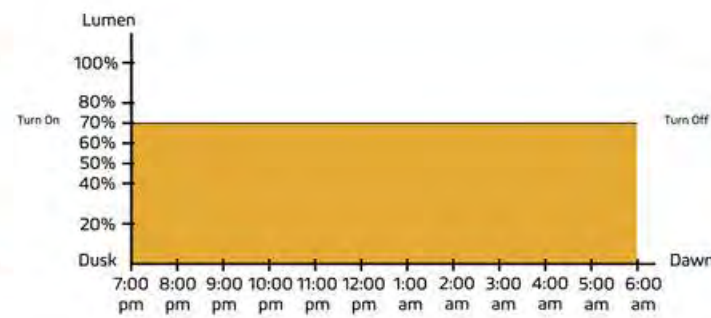
### 100% CONSTANT MODE

100% brightness from dusk to dawn.



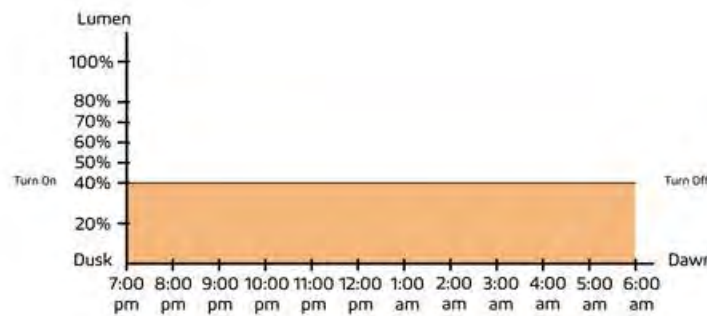
### 70% CONSTANT MODE

70% brightness from dusk to dawn.



### 40% CONSTANT MODE

40% brightness from dusk to dawn.



## SMART LIGHTING CONTROL SYSTEM


ID	Signal status	Update time	Street lamp height(m)	History voltage(V)	Battery power(W)	Solar panel power(W)	Street Lamp Power(W)	Operate
GA02080102771	🟢	2020-09-09 16:02:57	70	23.8	8	0	11	🔍 📄 🔄
GA02080143950	🟢	2020-09-09 16:30:50	70	23.8	8	0	11	🔍 📄 🔄
GA02080153079	🟢	2020-09-09 16:46:37	70	23.8	8	0	11	🔍 📄 🔄
GA02080177429	🟢	2020-09-09 16:24:22	70	23.8	8	0	11	🔍 📄 🔄
GA02080132064	🟢	2020-09-09 16:36:36	70	23.8	8	0	11	🔍 📄 🔄
GA02080184627	🟢	2020-09-09 16:24:22	70	23.2	8	0	11	🔍 📄 🔄
GA02080119081	🟢	2020-09-09 16:36:36	70	23.2	8	0	11	🔍 📄 🔄

## 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.



# > 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

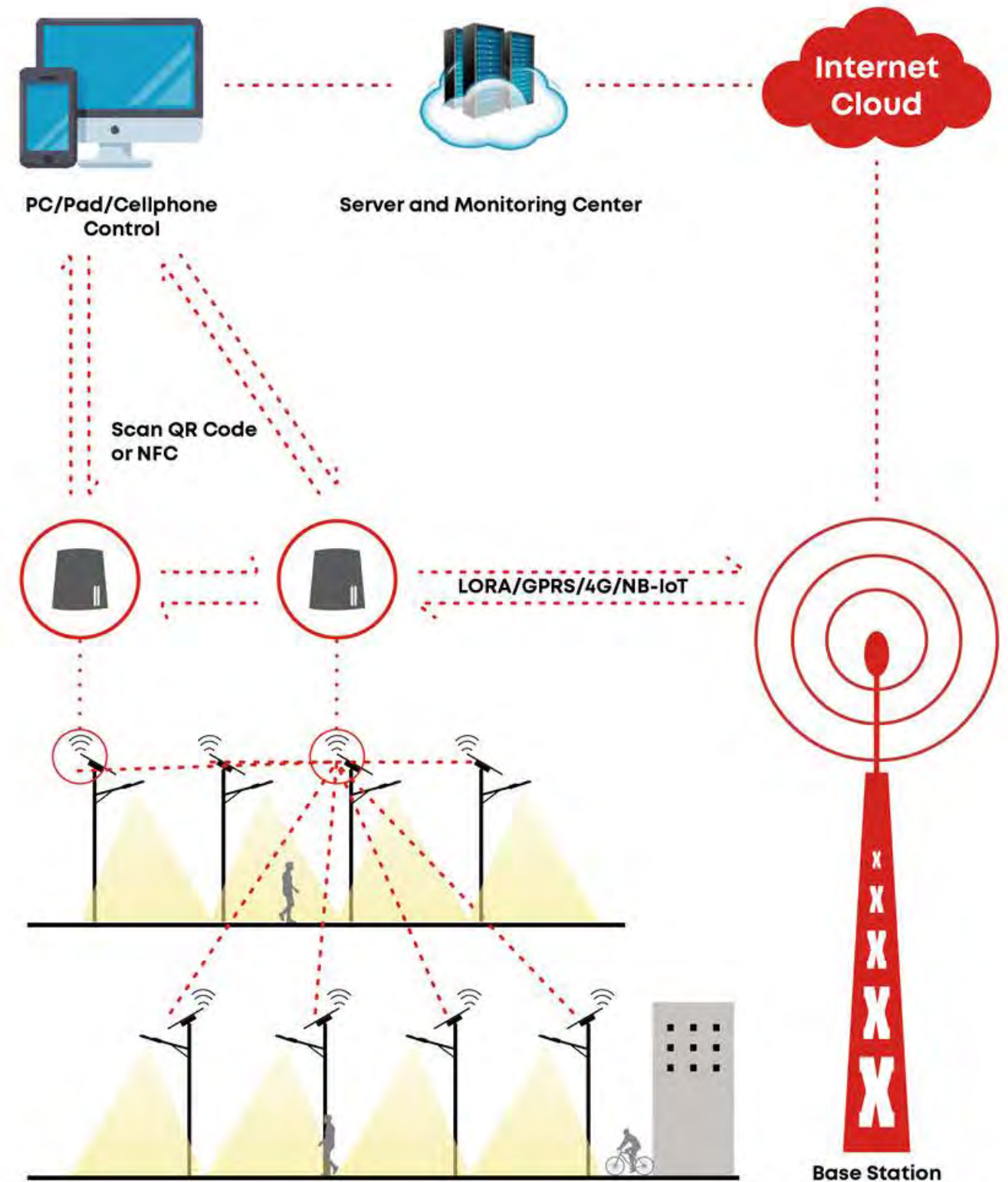
The gateway controller transmits the street light control information of all nodes under the gateway to the cloud platform through GPRS/3G/4G/NB-IOT (optional) wireless mode, and at the same time sends the instructions of the cloud platform to the street light controller of each node.

## 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



# 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 m²; Side: 0.0214 m²		Front: 0.0219 m²; Side: 0.035 m²		
SCx (Solar Panel)	Front: 0.45m²; Front-side: 0.32m²; Side: 0.08m²;	Front: 0.71m²; Front-side: 0.47m²; Side: 0.09m²;	Front: 1.14m²; Front-side: 0.73m²; Side: 0.09m²;	Front: 1.59m²; Front-side: 0.99m²; Side: 0.12m²;	Front: 1.59m²; Front-side: 0.99m²; 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

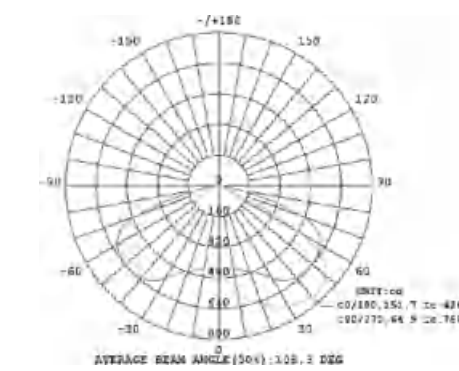
Lifespan	L90B10 - 52 000 h, @Tq 25°C				
Warranty	3 years (Warranty extension up to 5 years on request)				
Certification	CE RoHS (The company is ISO 9001 and ISO 14001 certified.)				
Product Size (Solar panel)	818*493*468mm	1003*653*508mm	1613*653*508mm	1500*990*593mm	1500*990*593mm
Net Weigh	25.5kg	35.5kg	45.5kg	73kg	73kg
Carton Size	Fixture: 520*270*135mm Box: 402*400*290mm Panel: 898*573*125mm	Fixture: 520*270*135mm Box: 620*400*290mm Panel: 1083*733*125mm	Fixture: 520*270*135mm Box: 691*400*290mm Panel: 1693*733*125mm	Fixture: 825*360*200mm Box: 1186*400*290mm Panel: 1560*1050*125mm	Fixture: 825*360*200mm Box: 1186*400*290mm Panel: 1560*1050*125mm
Gross Weight	Fixture: 3kg Box: 19kg Panel: 8kg	Fixture: 3kg Box: 25kg Panel: 12kg	Fixture: 3kg Box: 38kg Panel: 16kg	Fixture: 8.1kg Box: 46kg Panel: 25kg	Fixture: 8.1kg Box: 46kg 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

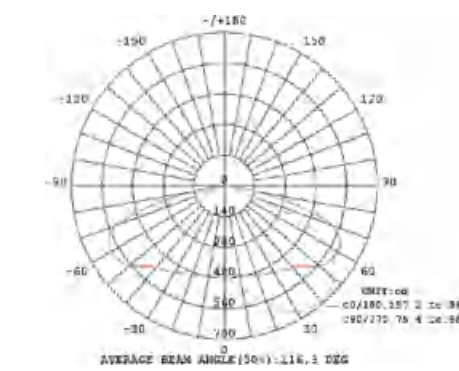
WATTS	VOLTAGE	LED CHIPS	TYPE OF SENSOR	CCT&CRI	DISTRIBUTION	MOUNT	OPTION
20WsL	NV=12/24V DC	L3=LUMILEDS 3030	00=Without Sensor	3070=3000K 70CRI	T2=TYPE II	A=Top Post	4KV SPD
40WsL		L5=LUMILEDS 5050	SN=Motion Sensor	4070=4000K 70CRI	T3=TYPE III		Intelligent Control
60WsL			PH=PhotoCell	5070=5000K 70CRI	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

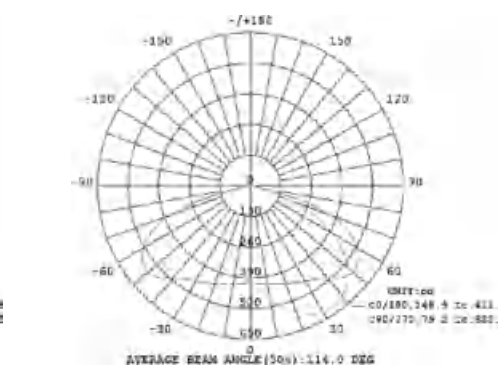
Type II



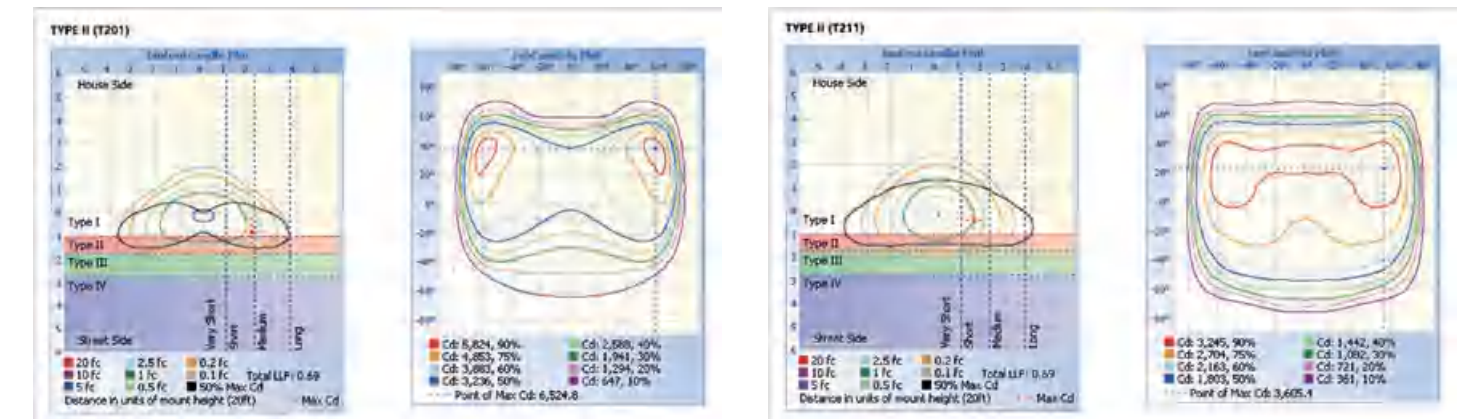
Type III



Type IV



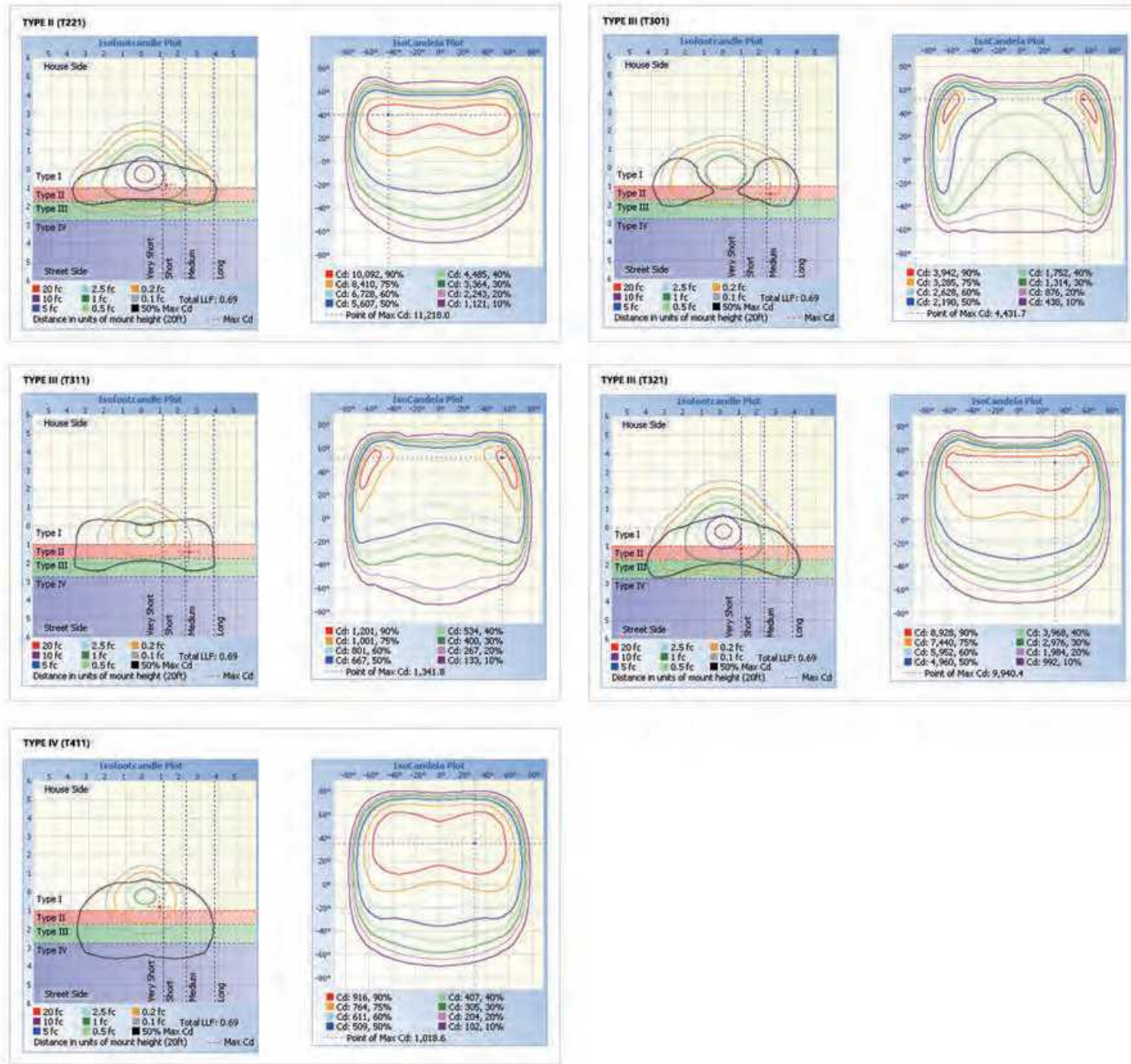
# Illuminance Diagram



## SL Series Specification Sheet

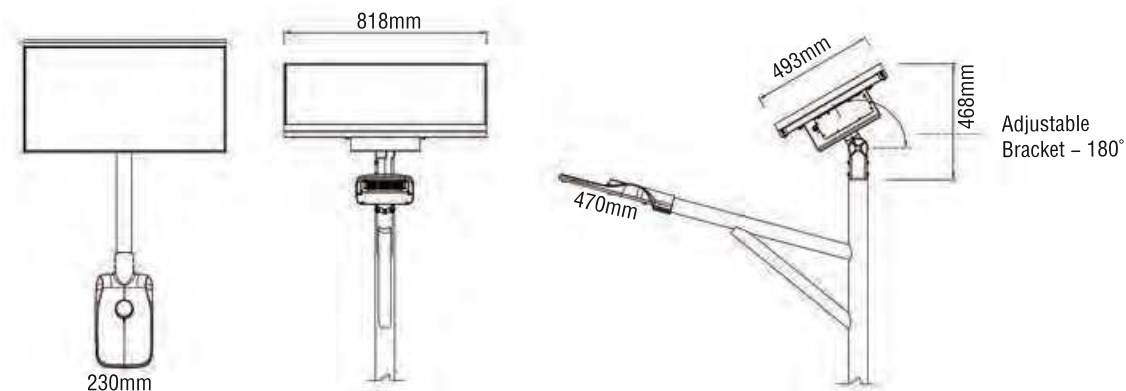
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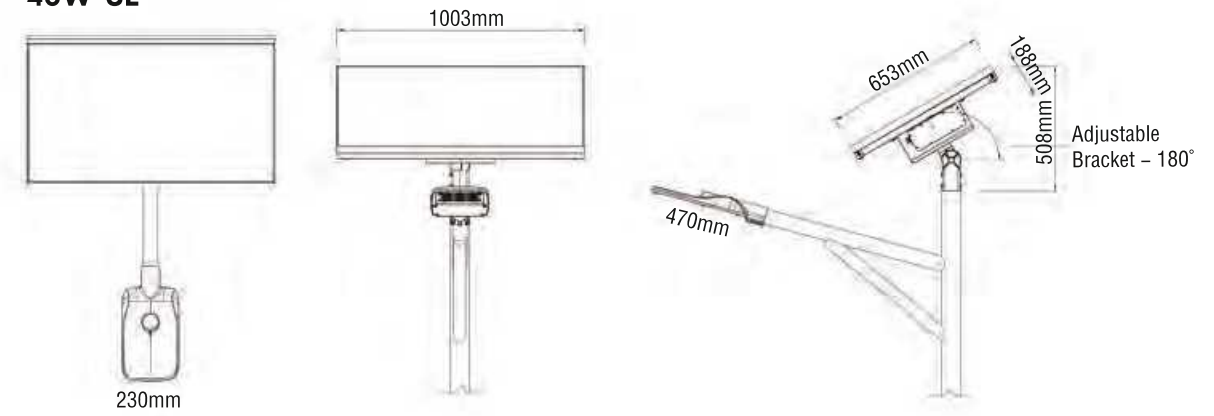


## Dimensions

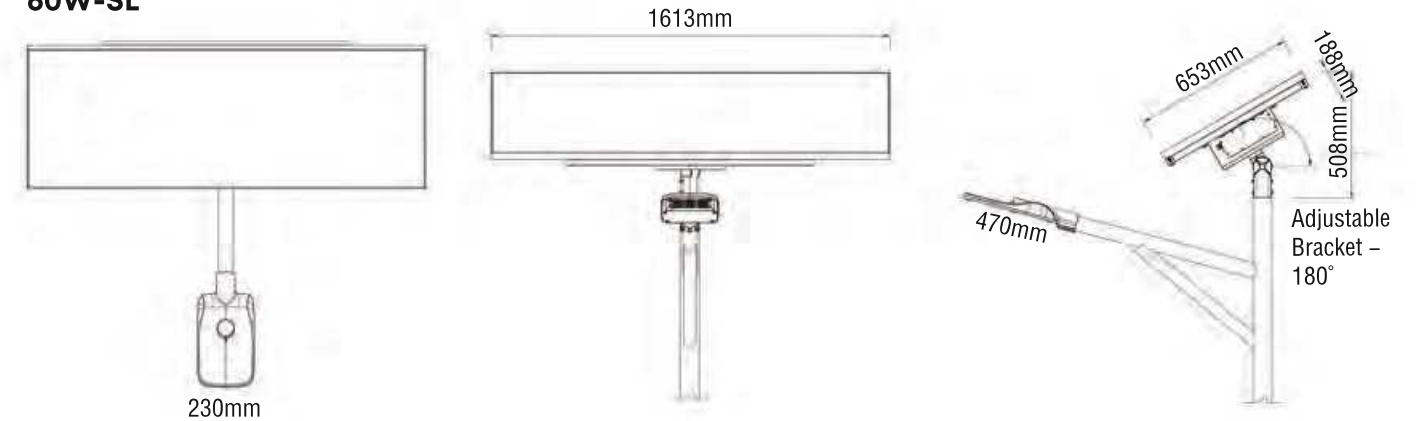
### 20W-SL



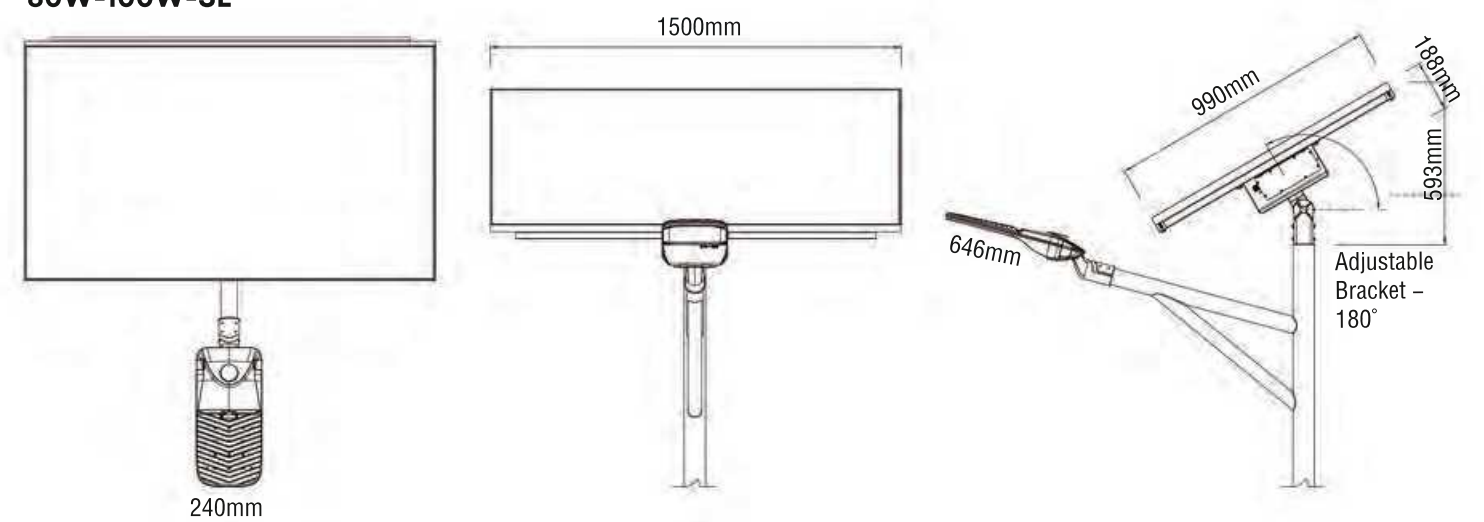
### 40W-SL



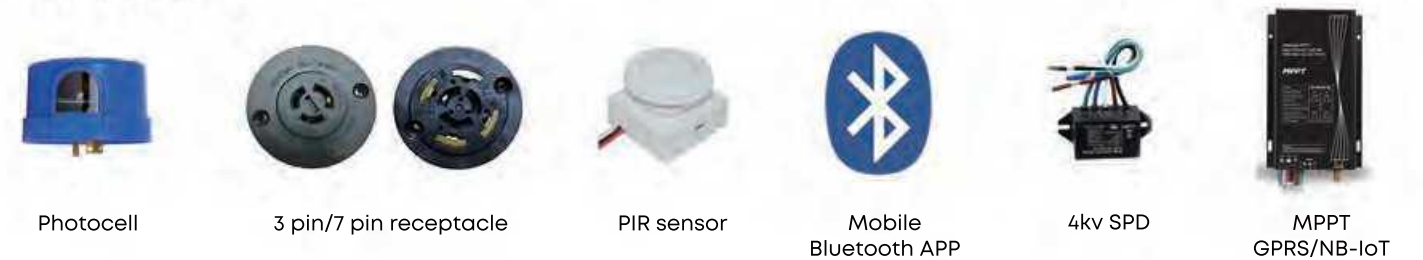
### 60W-SL



### 80W-100W-SL



## Accessories



\*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.

## SL Series Specification Sheet

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