

LECUSO



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LCS-XY SERIES

ALL IN ONE SOLER STREET LIGHT

POWER 30W/60W/80W/100W/120W/150W

LCS-XY

IP66 / IK09

All in one solar street light series

The LCS-XY series is our latest lighting system, equipped with double-sided solar modules and powerful lighting, which can maximize the utilization of light energy.

LCS-XY combines cutting-edge technology with efficient photovoltaic modules, The powerful LiFePO4 battery and intelligent controller are integrated into a stylish and compact design. The sleeve is equipped with gears to adjust the angle of the lamp body, achieving different lighting angles, improving product performance and efficiency. At the same time, the integrated design simplifies installation and enhances user experience.



LCS-XY-30W

LCS-XY-60W

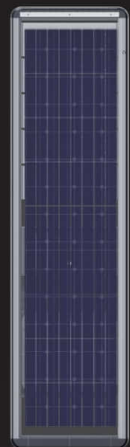
LCS-XY-80W

LCS-XY-100W

LCS-XY-120W/150W

Features of LCS-XY Series

- LCS-XY street light features all designs in one, equipped with double-sided solar modules and powerful lighting, which can maximize the utilization of light energy. Including PIR/microwave motion sensors and integrated intelligent controllers entering the design.
- The design of bilateral distribution boards makes them suitable for remote areas and areas without electricity supply.
- Deep cycle batteries are designed for 2000 charging and discharging times.
- Operating time: With the intelligent model enabled ,It can operate For 10 days during rainy weather
- The power range is between 30W and 150W.



Bifacial solar panel



Conversion Rate up to 30%



25 Years Lifespan



>2000times

Lifespan Cycle
High quality LL-ion battery
Intelligent temperature control

UP TO
220
lm/W

CRI
70/80/90

3000K
4000K
5000K
5700K
6500K

IP66

BIFACIAL
SOLAR PANEL

Smart
Sensor

IoT-4G

DIM

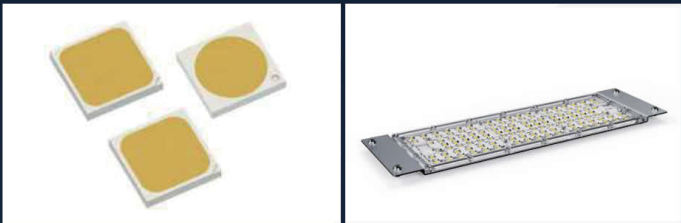
Efficient application of double glass



- Ultra high light efficiency, with a total light efficiency of 220LM/W
- Bifacial solar panels with an increased overall conversion efficiency of 30%.
- Independent battery compartment design, protecting the battery for easy battery replacement.
- The sleeve is easy to install and can adjust the optimal angle of the solar panel according to the path of the sun.
- There are two installation methods: horizontal and vertical, suitable for various applications
- Intended to replace traditional lighting systems. There are options from 30w to 150w to meet all road lighting requirements.
- Various road optical designs can adapt to various road conditions while ensuring the effective utilization of light.
- Featuring a built-in PIR/microwave motion sensor and smart controller

Photometrics Design

Lumen efficieney >220lm/w
achieve higher illumination



Efficient LED chips create first-class light sources. The overall lighting efficiency is >220lm/W, with aluminum lamp holders and sealed lenses, providing good heat dissipation, as if the LED chip is placed in a sealed unit. Therefore, it maintains a high level of brightness with almost no attenuation. The sealing lens is made of anti ultraviolet PC, with anti-aging and shockproof performance; The optimized light distribution makes the lighting area more uniform and wide.

Distribution

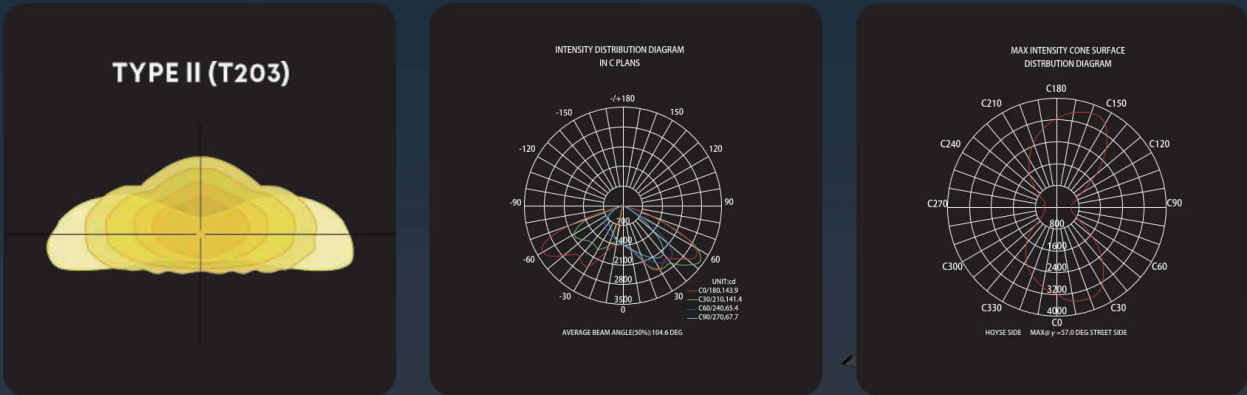
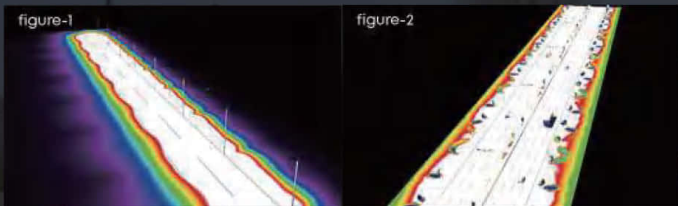


Figure-1: Example of rural branch road
Figure-2: Example of mian road or avenue



Lighting simulation design software can be used to plan and analyze street lights, resulting in a more intuitive display of lighting effects. It uses rendering, which is the process of generating images from a model through a computer program, to generate different tools for measuring simulated light levels.

Two installation methods

The lighting fixtures are installed horizontally and vertically, and the vertical version can support 0-20° angle adjustment. They can be adjusted according to different lighting environments to meet different lighting needs.



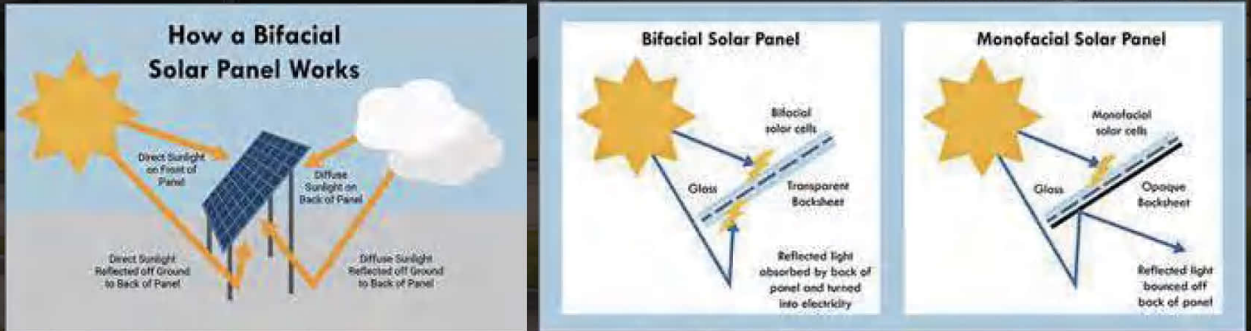
Bifacial Solar Panel

Cost-effectiveness

Cost is one of the biggest factors a big factor - particularly in the case of monofacial modules. The cost of bifacial modules has fallen precipitously over the last two decades. Notably, as costs have decreased, so too has the cost gap between mono- and bifacial modules.

High Conversion Efficiency

There is no doubt bifacial modules will increase power production. Results and studies have shown that bifacial modules can produce additional power between 10-20% over monofacial panels. If conditions are optimized and single-axis trackers adopted, the additional power can be as high as 30-40%.



Other Benefits

• Site Selection:

The site selection of the bifacial panels can be optimized. For places where land is less electricity supply and expensive, monofacial panels should be laid in the right direction to ensure maximum energy collection. However, bifacial modules can have optimal spacing and therefore higher yields. Also, bifacial yields are greater where the diffuse light energy is greater, which means at higher latitudes the bifacial yield will be greater than at lower latitudes.

• High Albedo:

The environment has a high albedo that is great for bifacial panels compared with monofacial panels. Desert sand is even a better option. The best option is white concrete or highly reflective roof foil. Snow and ice also have a very high albedo.

• Tilt:

More flexible than monofacial panel. Bifacial panels can receive light even at sunset. This will vary from site to site, but generally, 2-15 degrees more than the monofacial tilt has been shown to be effective.

Application Reference

- Roadlighting
- Arealighting
- Perimeterlighting

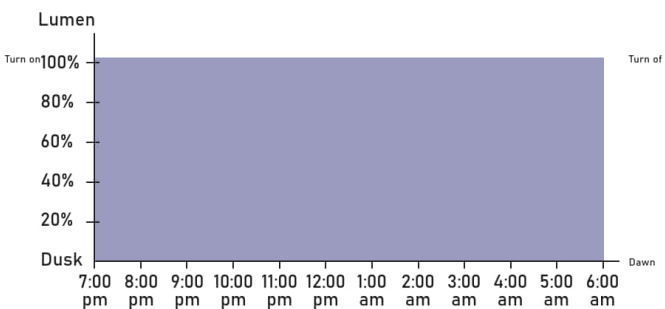
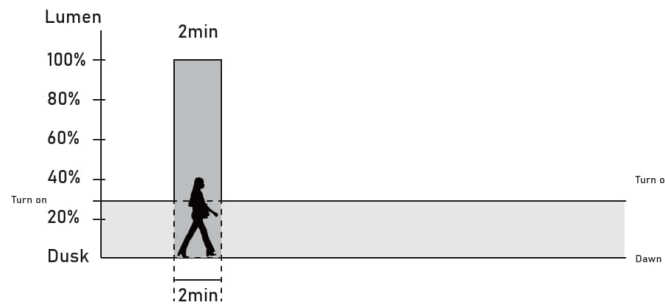
Streets, paths and bike paths
Residential streets
Shared zones, commercial
streets in urban areas
Rural roads,Urban roads
Motorways and ring roads



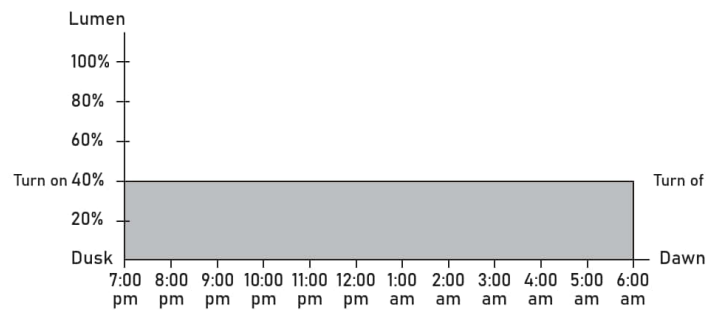
Smart City Starts With Smart Lighting

AUTONOMYCONTROLREFERENCE

30%~100% MOTION SENSOR MODE
Constant 30% brightness(turns on at dusk,turns off atdawn);
100% brightness turns on for 1minutes when motion is



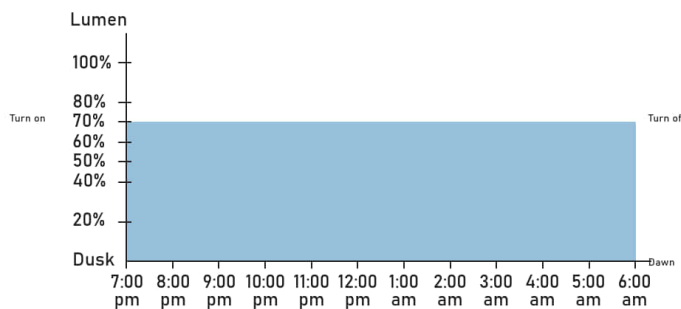
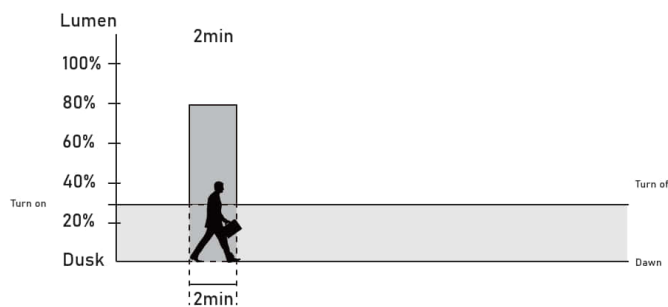
100%CONSTANTMODE
100%brightnessfrom dusktodawn.



40%CONSTANTMODE
40%brightnessfrom dusktodawn.

1: 3H-Detected 100%, None 30%;2: 3H-Detected 70%, None 30%;
3: 3H-Detected 50%, None 20%; 4: 3H-Detected 30%, None 20%;
5: Subject to specific order

20%~80% MOTION SENSOR MODE
Constant 30% brightness(turns on at dusk,turns off at dawn);
80% brightness turns on for 2minutes when motion is



70%CONSTANTMODE
70%brightnessfrom dusktodawn.

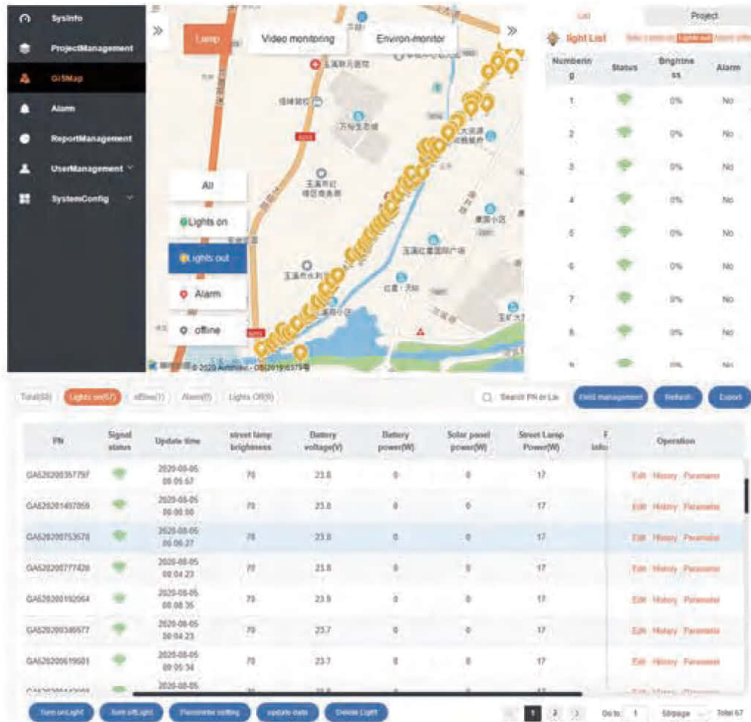
PROGRAMABLECONTROLLEROPTIONAL



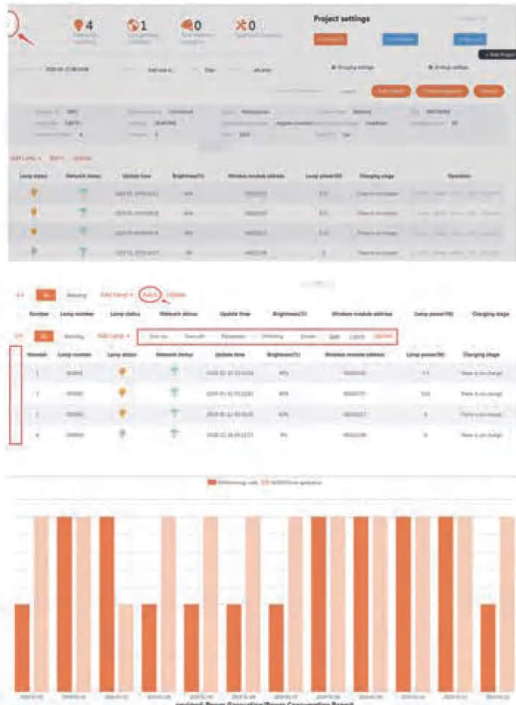
A programmable remote control is used to adjust the appropriate plan according to the different periods of daylight and road conditions in each area and season.

Check battery status
View charging history
Set different running time periods
Problem diagnosis

SMART LIGHTING CONTROL SYSTEM

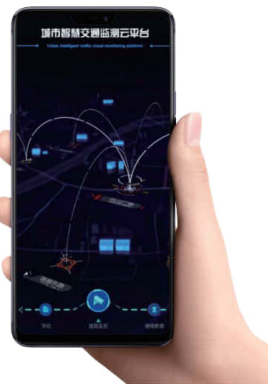


DATA&PROJECTMANAGEMENT



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.

App licationof Typical Networking of Smart Street Light(optional)

strategy control

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

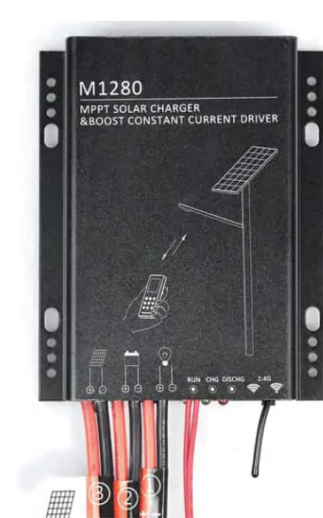
Gateway Control

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

Cloud Platform

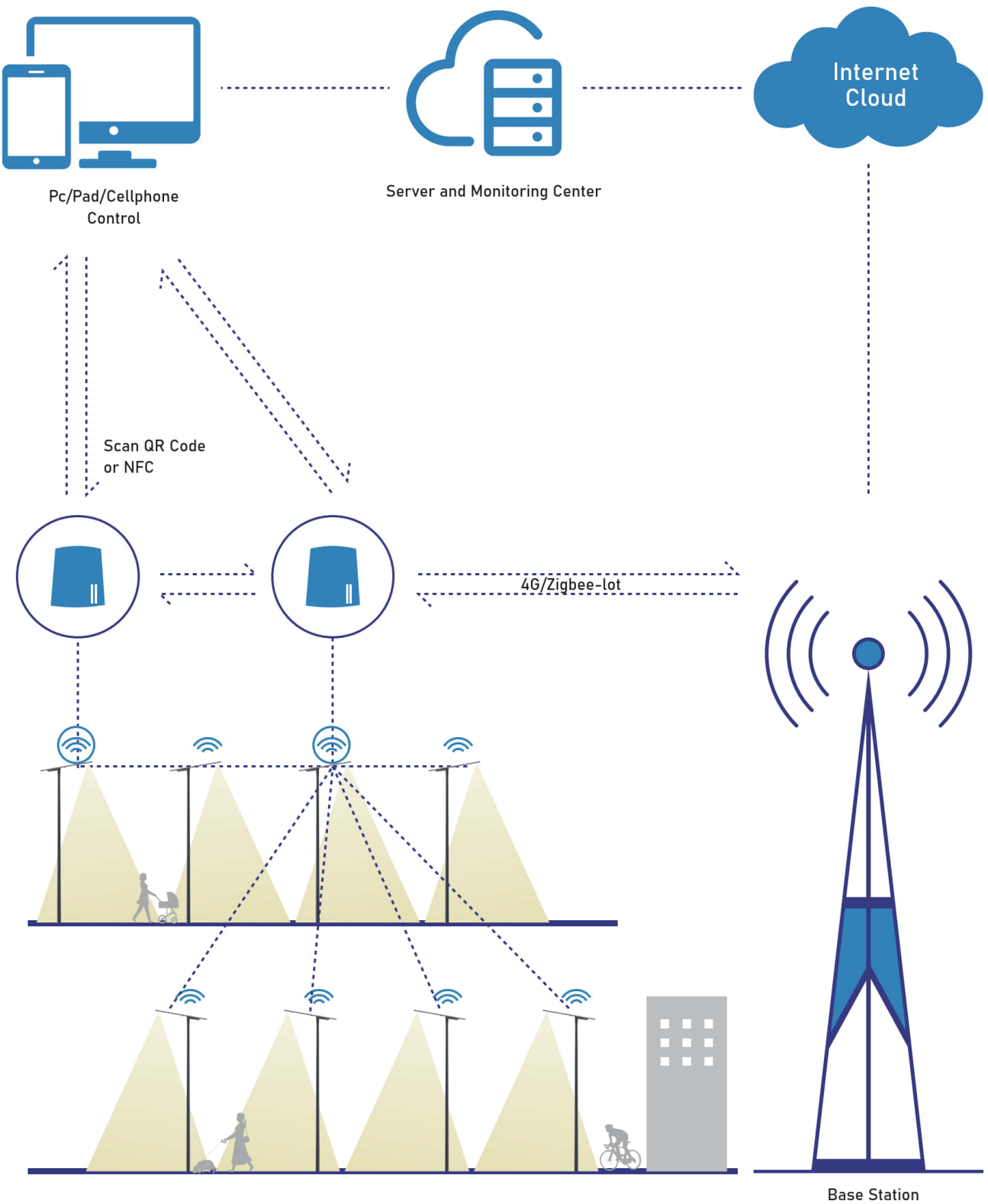
The gateway controller transmits the street light control information of all nodes under the gateway to the cloud plat-form through 4G/Zigbee-IoT(optional) wireless mode, and at the same time sends the instructions of the cloud plat-form to the street light control-ler of each node.

ControllerIoT-4G/IOT



- Built-in controller module;
- Adopt Moving Track MPPT maximum power tracking technology, with higher trackingefficiency and faster speed;
- Lead-acid battery and lithium battery are universal. Operating parameters can be set byremote controller;
- Ultra green power control technology with extremely low static power consumption anddor-mant 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, workingtem-perature can be set;
- A variety of intelligent modes can be selected, automatically adjust the load poweraccording to the battery power;
- High precision digital booster constant-current control algorithm, high efficiency and highcon-stant-current precision;
- 2.4G wireless communication, can set read parameters, read status, etc;
- Battery/Pv reverse connection protection,LED short circuit/open circuit/limited powerprotec-tion and other multiple protection functions.

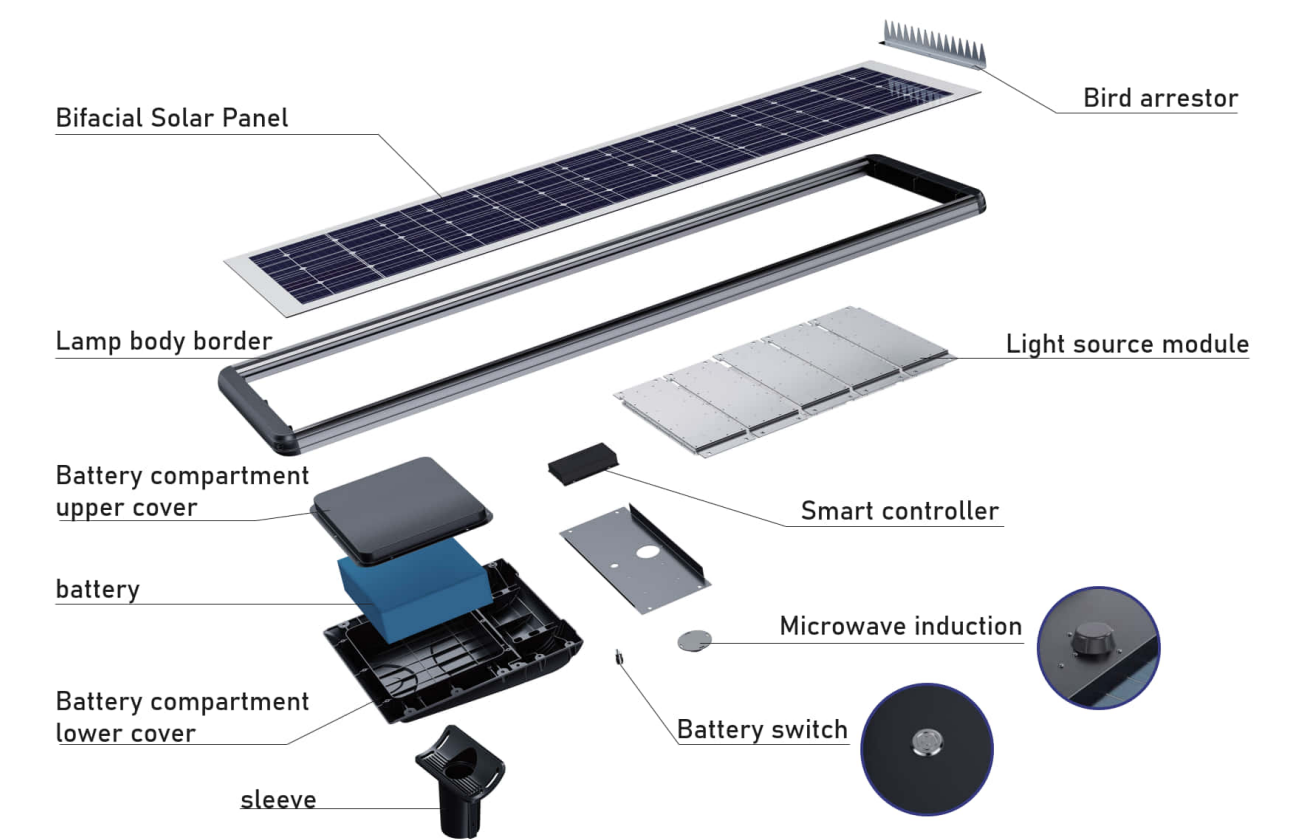
Intelligent control system



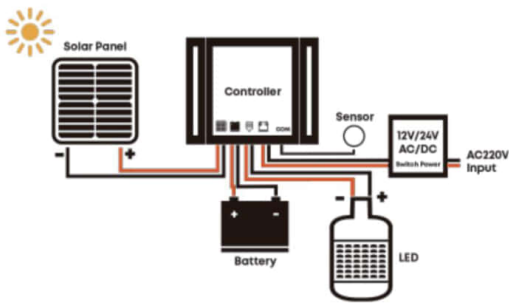
installation height



Construction Features



- ◎ The integrated module design is convenient for maintenance and installation.
- ◎ The use of light source modules allows for quick replacement and easy operation.
- ◎ Intelligent microwave induction, achieving energy-saving and electricity saving by turning on the lights when people come and turning off the lights when people go.
- ◎ Power switch design to avoid excessive discharge during transportation.
- ◎ Using lithium iron phosphate batteries, safe and pollution-free.
- ◎ There are two installation methods: horizontal installation, vertical installation, and adjustable support angle.



Working Way

The solar panel receives solar radiation energy and converts it into electricity, which is stored in the battery by the photovoltaic controller. At night, when the illumination gradually decreases to about 10Lux and the solar panel voltage is 5V, the charge and discharge controller detects this voltage value, and controls the battery to discharge for the LEDs to complete the process of daytime charging and evening discharge. When the battery voltage is lower than the set value, the power supply will switch to mains power, and when the voltage is higher than the set value, it will switch to battery power. The standard configuration does not include mains complementary function.

Electrical Data

Model	LCS-XY-30W	LCS-XY-60W	LCS-XY-80W	LCS-XY-100W	LCS-XY-120W	LCS-XY-150W
Power	30w	60w	80w	100w	120w	150w
Control Option	Photocell sensor, timing, dimming, intelligent power saving, microwave sensor, 4G, IOT, Smart Lighting Control optional					

Photometric Data

LED Manufacturer	Philips
LED model	3030
Lens	Japan Panlite Polycarbonate
Efficacy lm/W	220LM/W
ULOR	= 0%, @ Luminaire inclination 0°
CCT	3000K, 4000K, 5000K, 5700K, 6500K
CRI	70Ra, 80Ra, 90Ra optional
Beam angle	T2

Mechanical Data

IP Rating	IP66, according to standard EN 60529					
SCx	Front: 0.3465 m²; Front-side: 0.0535 m²; Side: 0.0622 m²;	Front: 0.3465 m²; Front-side: 0.0535 m²; Side: 0.0622 m²;	Front: 0.4143 m²; Front-side: 0.0535 m²; Side: 0.0069 m²;	Front: 0.4831 m²; Front-side: 0.0535 m²; Side: 0.0706 m²;	Front: 0.5537 m²; Front-side: 0.0535 m²; Side: 0.0743 m²;	Front: 0.6215 m²; Front-side: 0.0535 m²; Side: 0.0790 m²;
Housing	Heavy-duty die-cast aluminum (EN AC-46100)					
Surface treatment	Anti-UV thermosetting polyester / epoxy primer + Anti-UV thermosetting polyester+Anodization					
Painting	Black, Custom request					
Mounting	Horizontal and vertical installation. 0-20° Adjustable					

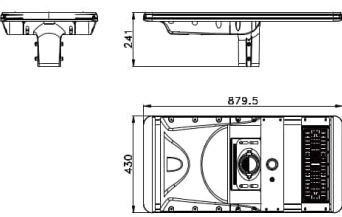
Solar Panel Data

Photovoltaic panel	Double crystal photovoltaic panel					
Solar Panel	18v 60w	18v 80w	18v 100w	18v 120w	18v 150w	36v 160w
Bifacial Output -Rearside Power Gain	5%-25% Increase					
Lithium Battery	12.8v 18AH	12.8v 30AH	12.8V 42AH	12.8V54AH	12.8V60AH	25.6V 36AH
WH	230.4WH	384WH	537.6WH	691.2WH	768WH	921.6WH
Charing Time	5-6 Hours					
Battery lifespan	>2000 times cycle					
Working time	12 Hours Per day, 7-10 Rainy Days under intelligent model.					
Working Temperature	-25° C to 60° C					
Control system	MPPT IoT, AC/DC Hybrid solution, PWM optional					

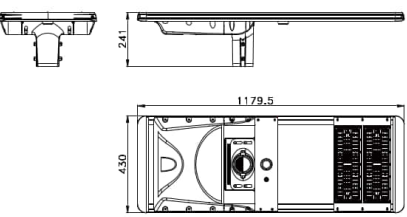
Others

Led Lifespan	100000 hrs, @Tq 25° C					
Warranty	3 years (Warranty extension up to 5 years on request)					
Certification	CE,ROHS,,FCC,IK09,IP66,IEC,ISO9001,For other certificates please request					
Product Size	880*430*100mm	1180*430*100mm	1380*430*100mm	1610*430*100mm	1880*430*100mm	1880*430*100mm
Net Weight	11.5kg	14kg	17kg	20kg	24kg	26kg
Carton Size(1pcs/ctns)	910*500*110mm	1210*500*110mm	1410*500*110mm	1640*500*110mm	1910*500*110mm	1910*500*110mm
Bracket Carton Size(1pcs/ctns)	330*230*150mm					
Gross Weight	12.2kg	14.8kg	18kg	21.5kg	25.5kg	28kg
Recommend installation height	4-6m	6-8m	7-8m	8-10m	10-12m	10-12m
Application field	Urban and rural street, Highway, road					

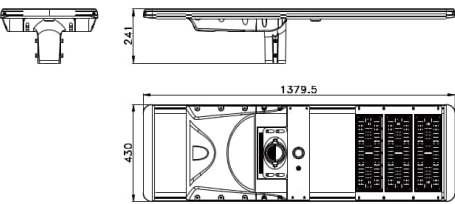
LCS-XY-30W



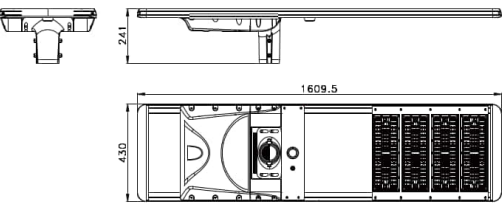
LCS-XY-60W



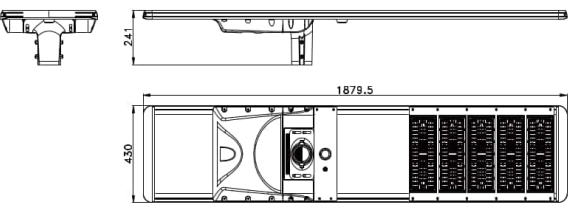
LCS-XY-80W



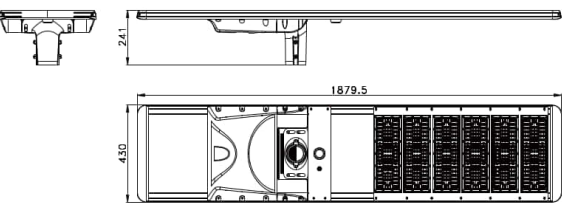
LCS-XY-100W



LCS-XY-120W



LCS-XY-150W



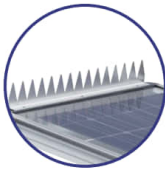
Accessories



A-style vertical sleeve



B-style horizontal sleeve



Bird arrestor



Microwave induction



Battery switch



remote control



intelligent controller

*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.