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# SOLAR STREET LIGHT SOLUTION

## Version II

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# ABOUT CHINT



## CHINT A leading global provider of smart energy solutions

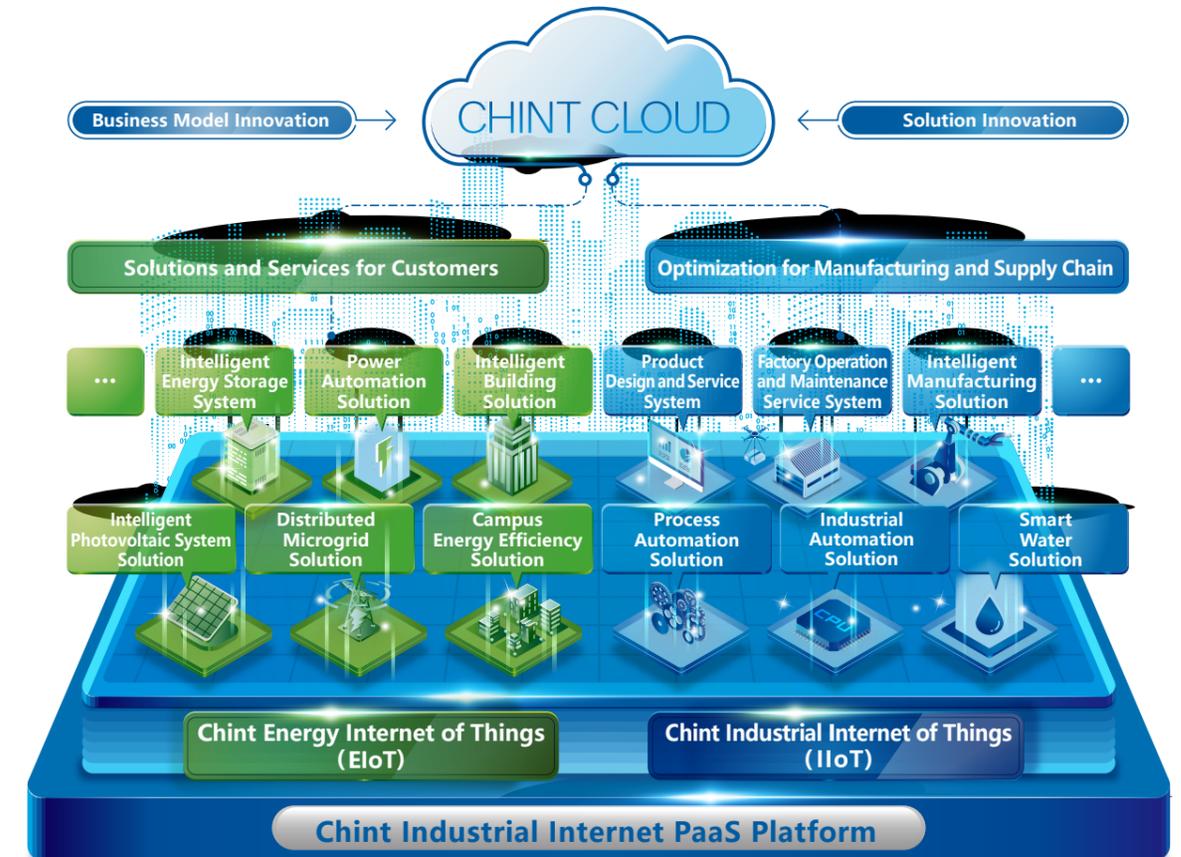
Founded in 1984, CHINT is a leading global provider of smart energy solutions. It is actively deploying “4+1” industrial sectors including smart electrics, green energy, industrial control and automation, smart home and incubator, forming an integrated whole industry chain of “power generation, storage, transmission, substation, distribution, sales and consumption”. And it boasts an extensive business network across over 140 countries and regions as well as more than 30,000 employees and an annual sales revenue of over USD 11.4 billion. CHINT has been ranking among China’s Top 500 companies for 18 consecutive years. Its subsidiary, CHINT Electrics is the first company in China with low-voltage electrics as its main business getting listed on the A-share market as one of the Top 50 Asian listed companies.

To comply with the trend of integrated development of modern energy, intelligent manufacturing and digital technology, CHINT has adopted “One Cloud & Two Nets” as the business strategy. CHINT Cloud fulfills digital application and services in both

internal and external as the platform of intelligent technology and data application. Based on the Industrial Internet of Things (IIoT), CHINT built an intelligent manufacturing system and realizes intelligent application in electrical industry. Relying on the Energy Internet of Things (EIoT), CHINT built its smart energy system and develops the regional EIoT mode.

Focusing on energy system of supply, storage, transmission, distribution and consumption, CHINT has core businesses of clean energy, energy distribution, big data and energy value-added services. Furthermore, CHINT pillar businesses include photovoltaic equipment, energy storage, power transmission & distribution, low-voltage apparatuses, intelligent terminals, software development and control automation. With developing into a platform-based enterprise, CHINT provides a package of energy solutions for public institutions, industrial & commercial users and end users, by building a regional smart energy operation ecosystem.

# ONE CLOUD & TWO NETS STRATEGY



Energy system optimization is an inevitable trend against the background of resource shortage, environmental pollution and climate change – three challenges faced by global energy development. To keep in line with the trend, CHINT actively implements the business strategy of One Cloud & Two Nets, continuously promotes the deep integration of big data, IoT, AI and manufacturing industry in stages to become a platform-based enterprise, and leads the new direction of industry development.

As a medium of smart technology and data applications, CHINT Cloud connects corporate in-house manufacturing with operation and management data, realizing digital applications and services both internally and externally.

As a user-centric multi-energy complementary smart energy system, CHINT EIoT provides a package of energy solutions for governments, industrial & commercial users and end users. Its business includes Smart Energy Efficiency, Smart Power, Smart Home and Smart Clean Energy, etc.

As a smart manufacturing system based on corporate digital transformation, CHINT IIoT constitutes a flexible, high-efficiency and intelligent industrial system. Its business includes Intelligent Manufacturing, Intelligent Industry, Smart Water, Smart Heating, etc.

# GLOBAL FOOTPRINT



**4** International R&D Centers:  
North America, Europe, Asia Pacific, North Africa

**6** International Marketing Territories:  
Asia Pacific, Western Asia and Africa, Europe, Latin America, North America, China

**12** Manufacturing Bases:  
China (Wenzhou, Hangzhou, Shanghai, Jiaxing, Xianyang, Ji'nan), Thailand, Singapore, Vietnam, Malaysia, Egypt and Algeria

**20+** International Logistics Centers

**21** Global Subsidiaries

**2000+** Sales Companies

## GLOBAL CAPACITY LAYOUT

The industrial manufacturing bases are mainly located in Wenzhou, Hangzhou, Shanghai, Jiaxing and Xianyang. Additionally, CHINT has set up factories in Thailand, Egypt, Singapore, Vietnam, Malaysia, etc.



Egypt Production Base



Vietnam Production Base



Malaysia Production Base



Thailand Solar Power Production Base



Singapore Complete Electric Equipment Production Base



Shanghai Production Base



Hangzhou Production Base



Wenzhou Production Base



Jiaxing Production Base



Xianyang Production Base

# R&D, QUALITY, SALES, LOGISTICS

By providing reliable products and service for clients, CHINT puts forward the concept "Great Quality." Quality control and upgrade is divided into four systems: scientific research, quality control, marketing service and logistics distribution. These methods and strategies make a comprehensive upgrade to product quality and services. Emphasis on "prevention first, continuous improvement" is the basis of an effective quality inspection system. Leading the management process of "Great Quality" in the production process controls each link of production accurately and realizes the institutional operation of quality improvement.

"Great Quality" is not just a slogan, but a belief rooted in each employee's work. High-quality and accuracy are the basic requirement. Starting from a routine operation by each staff to implementing a high-quality of production and service, CHINT is your most reliable partner.

## Service Concept

Sincerely care for customers, quality creates value

## Service Purpose

Innovative and progressive, satisfying the customers



## Integrated Vertical R&D

By gathering the global industry elites to Provide safe and stable energy-saving green and advanced electric products.

5%

At least 5% of revenue is invested in research and development



## Great Quality System

Ensuring flaw-free and trouble-free products, the multi-dimensional and multilevel control is conducted through procurement, inspection, quality control and certification.



## One-stop Services

CHINT's concept is that it is not difficult to fulfill a high-quality logistics distribution at one time, while it is difficult to stay as accurate and prompt as the first-time. High-efficiency and high-precision accuracy are our requirement.



## 48-Hour Response

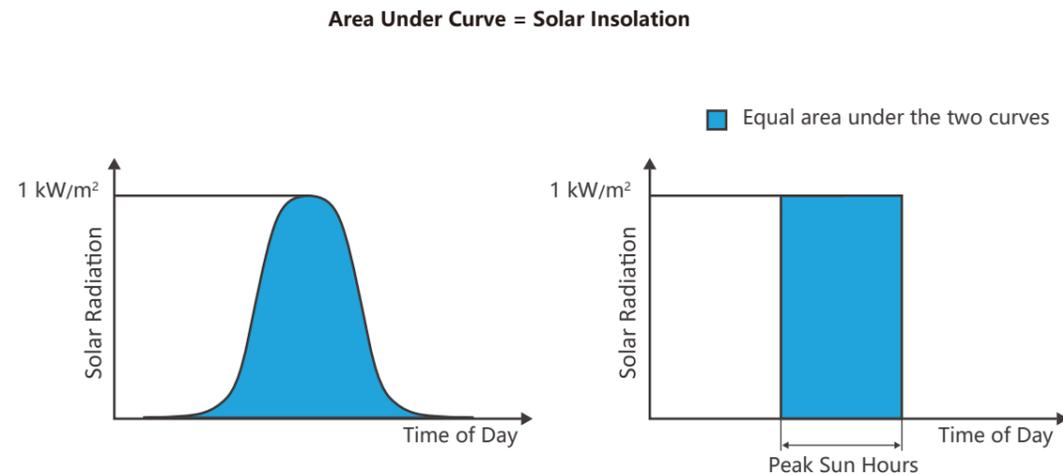
Providing end-to-end one-stop services for customers with complaints, business consulting and technical support by solving problems immediately and including any possible problems in advance.



## Common Questions of Solar Street Lights

### ■ Peak sun-hour

A peak sun-hour, specifically, is an hour during which the intensity of sunlight is 1,000 watts per square meter. The amount of solar radiation, or insolation, delivered by the sun varies throughout the day, based on the sun's position in the sky, clouds, and other atmospheric conditions.



### ■ Solar street light control

The controller adopts two kinds of strategies, microwave induction and light-controlled & time-controlled. It is an intelligent waterproof and no one operates. The controller is connected with solar panels, energy storage batteries and light sources. When the voltage of the panels is detected to be reduced to a set value, an instruction is issued to illuminate the light sources. When the set time arrives, the system automatically turns off the light source.

### ■ Can solar street lights work on rainy days?

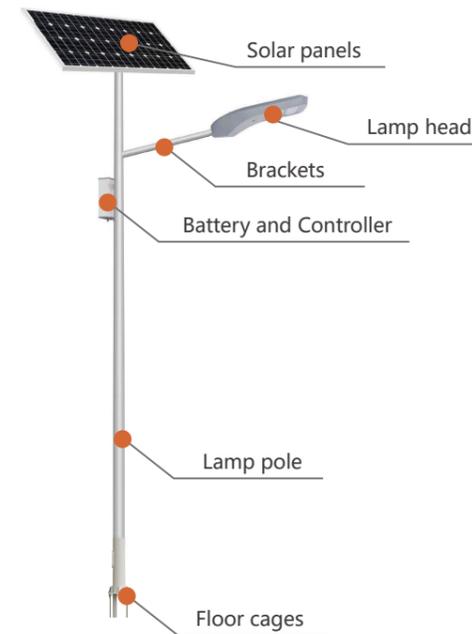
Usually solar street lights use the energy radiated by the sun during the day and store in the batteries to power the lights at night. However, during rainy season the case is different. We may not see the sun for many days and weeks so in such case solar street light will use high capacity lithium battery where energy is stored during the day. In the design, the battery configuration will be based on the local rainy and cloudy weather conditions, such as one or three days, so even if rainy and cloudy days occur, it can be continuously illuminated.

### ■ Operation and maintenance of solar street light

The solar energy system does not need much maintenance intuitively. If there is a lot of local dust, it is recommended to clean up the solar panels once a quarter in order to maintain good power generation effect.

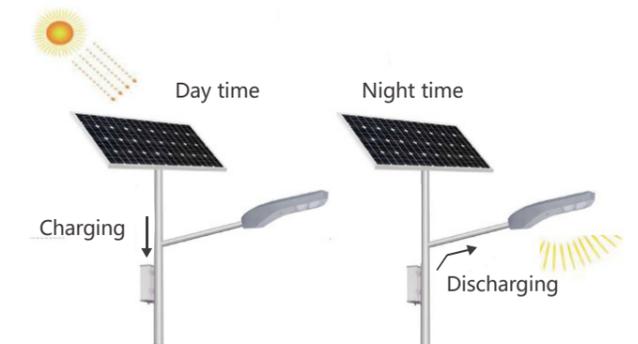


## How it works



Reference photo of Solar Street Light

Solar street light working principle is easy and simple. Solar street lights have solar panels that are responsible for converting the sunlight radiation into electricity. The device's semiconductor materials facilitate the process of conversion of solar energy into electricity. The energy conversion process is known as the "photovoltaic effect." The electrical energy is stored in the rechargeable batteries, which powers a fluorescent or LED lamp during the night.



### Solar street lights will experience four stages during working

#### ■ Charging

Throughout the day, the solar panels will convert the solar energy from the sun into electricity which will charge the battery. The intelligent solar controller charges the battery throughout the day and controls the current to ensure that the battery is not overcharged.

#### ■ Stop Charging

As the sun sets, the built-in photocell will sense the voltage drop, the panels are no longer taking a charge. The battery has been charged throughout the day and is now ready to discharge and provide electricity for the lamp and turn it on. If there is inclement weather, there are usually 3-4 days backup for most solar lighting system. The specific configuration depends on customer needs.

#### ■ Lighting

When the illuminance of the surrounding environment or time reaches the starting threshold set by the controller, the solar street light is started and powered by the battery.

#### ■ Stop Lighting

When the illuminance of the surrounding environment or time reaches the shutdown threshold set by the controller, the solar street light is turned off and the battery stops supplying power.

### Advantages

**Energy saving:** PV modules convert solar energy into electricity and provide power for lamps.

**Green energy:** Electricity produced from solar panels is pollution-free;

**Safety:** There will be no electric shock, fire and other accidents.

**Convenience:** Simple installation, construction without cable erection or excavation, no need to worry about power outage or power limit;

**Long service life:** high technical content, intelligent control system, reliable quality;

# Contents

<b>Main Equipment</b> .....	01-11
<b>ALL-IN-ONE</b> .....	12-13
<b>ALL-IN-TWO</b> .....	14-15
<b>ALL-IN-THREE</b> .....	16-17
<b>Solar Garden Light</b> .....	18-19
<b>Project Reference</b> .....	20

# MAIN EQUIPMENT

Solar street lights consist of four main parts: solar panel, lighting fixture, rechargeable battery and lamp pole.

## Solar Panel

The solar panel is one of the most important parts of a solar street light, as the solar panel can convert solar energy into electricity that the lamps can use. There are two types of solar panels commonly used in solar street lights: monocrystalline and polycrystalline. The conversion rate of monocrystalline solar panels is much higher than polycrystalline solar panels.



## Monocrystalline Solar Panels

### Electrical specifications

Rated output (Pmpp) at STC	60W	90W	120W	180W
Rated voltage (Vmpp) at STC	18V	18V	18V	18V
Rated current (Impp) at STC	3.33A	5.0A	6.66A	10.0A
Open circuit voltage (Voc) at STC	21.5V	21.5V	21.5V	21.5V
Short circuit current (Isc) at STC	3.8A	5.8A	7.79A	11.7A
Maximum system voltage	1000Vdc			
Normal operating cell temperature (NOCT)	25°C±2°C			
Power deviation	±3%			
Standard test conditions (STC)	1000W/m <sup>2</sup> solar radiation, air quality 1.5, battery temperature 25°C			
Temperature coefficient (Pmpp)	-(-0.5±0.05)			
Temperature coefficient (Impp)	0.06±0.01			
Temperature coefficient (Vmpp)	-0.35			
Number of cells/ cell arrangement	36 (4*9 )			
Cells dimension	Mono cells 156.75*156.75mm			
Frame technology	Aluminum, silver anodized			
Front glass	Tempered glass			
Module composition	Glass/ EVA/ Backsheet			

Rated output (Pmpp) at STC	120W	180W	240W	360W
Rated voltage (Vmpp) at STC	36V	36V	36V	36V
Rated current (Impp) at STC	3.33A	5.0A	6.66A	10.0A
Open circuit voltage (Voc) at STC	43V	43V	43V	43V
Short circuit current (Isc) at STC	3.8A	5.8A	7.79A	11.7A

Maximum system voltage	1000Vdc
Normal operating cell temperature (NOCT)	25°C±2°C
Power deviation	±3%
Standard test conditions (STC)	1000W/m <sup>2</sup> solar radiation, air quality 1.5, battery temperature 25°C
Temperature coefficient (Pmpp)	-(-0.5±0.05)
Temperature coefficient (Impp)	0.06±0.01
Temperature coefficient (Vmpp)	-0.35
Number of cells/ cell arrangement	72 (6*12 )
Cells dimension	Mono cells 156.75*156.75mm
Frame technology	Aluminum, silver anodized
Front glass	Tempered glass
Module composition	Glass/ EVA/ Backsheet

## Polycrystalline Solar Panels

### Electrical specifications

Rated output (Pmpp) at STC	50W	80W	105W	160W
Rated voltage (Vmpp) at STC	18V	18V	18V	18V
Rated current (Impp) at STC	2.77A	4.44A	5.83A	8.88A
Open circuit voltage (Voc) at STC	21.5V	21.5V	21.5V	21.5V
Short circuit current (Isc) at STC	3.24A	5.19A	6.82A	10.38A
Maximum system voltage	1000Vdc			
Normal operating cell temperature (NOCT)	25°C±2°C			
Power deviation	±3%			
Standard test conditions (STC)	1000W/m <sup>2</sup> solar radiation, air quality 1.5, battery temperature 25°C			
Temperature coefficient (Pmpp)	0.5±0.05			
Temperature coefficient (Impp)	0.06±0.01			
Number of cells/ cell arrangement	36/4*9			
Cells dimension	Poly cells 156.75*156.75mm			
Frame technology	Aluminum, silver anodized			
Front glass	Tempered glass			
Module composition	Glass/ EVA/ TPT			

Rated output (Pmpp) at STC	105W	160W	215W	320W
Rated voltage (Vmpp) at STC	36V	36V	36V	36V
Rated current (Impp) at STC	2.91A	4.44A	5.97A	8.88A
Open circuit voltage (Voc) at STC	43V	43V	43V	43V
Short circuit current (Isc) at STC	3.4A	5.19A	6.98A	10.38A
Maximum system voltage	1000Vdc			
Normal operating cell temperature (NOCT)	25°C±2°C			
Power deviation	±3%			
Standard test conditions (STC)	1000W/m <sup>2</sup> solar radiation, air quality 1.5, battery temperature 25°C			
Temperature coefficient (Pmpp)	0.5±0.05			
Temperature coefficient (Impp)	0.06±0.01			
Number of cells/ cell arrangement	72/6*12			
Cells dimension	Poly cells 156.75*156.75mm			
Frame technology	Aluminum, silver anodized			
Front glass	Tempered glass			
Module composition	Glass/ EVA/ TPT			

## Lighting Fixture

LEDs are usually used as the primary lighting source of modern solar street lights, as the LED will provide much higher luminosity with lower energy consumption. The energy consumption of an LED fixture is at least 50% lower than the HPS fixture counterpart, which is widely used as the lighting source in traditional street lights. A lack of warm-up time in LEDs also allows for use of motion detectors for additional efficiency gains.

## Rechargeable Battery

Batteries will store the electricity generated by the solar panel during the day and provide energy to the fixture during the night. The life cycle of the battery is very important to the lifetime of the light and the capacity of the battery will affect the backup days of the lights. There are two types of batteries commonly used in solar street lights which are lead acid batteries and Lithium batteries. Lithium batteries are more popular in the application as they are compact in size and not prone to theft. In view of the high reliability, better cycle life and cost-effectiveness of lithium batteries, all the promoted solar street light products use lithium batteries.



## Lamp Pole

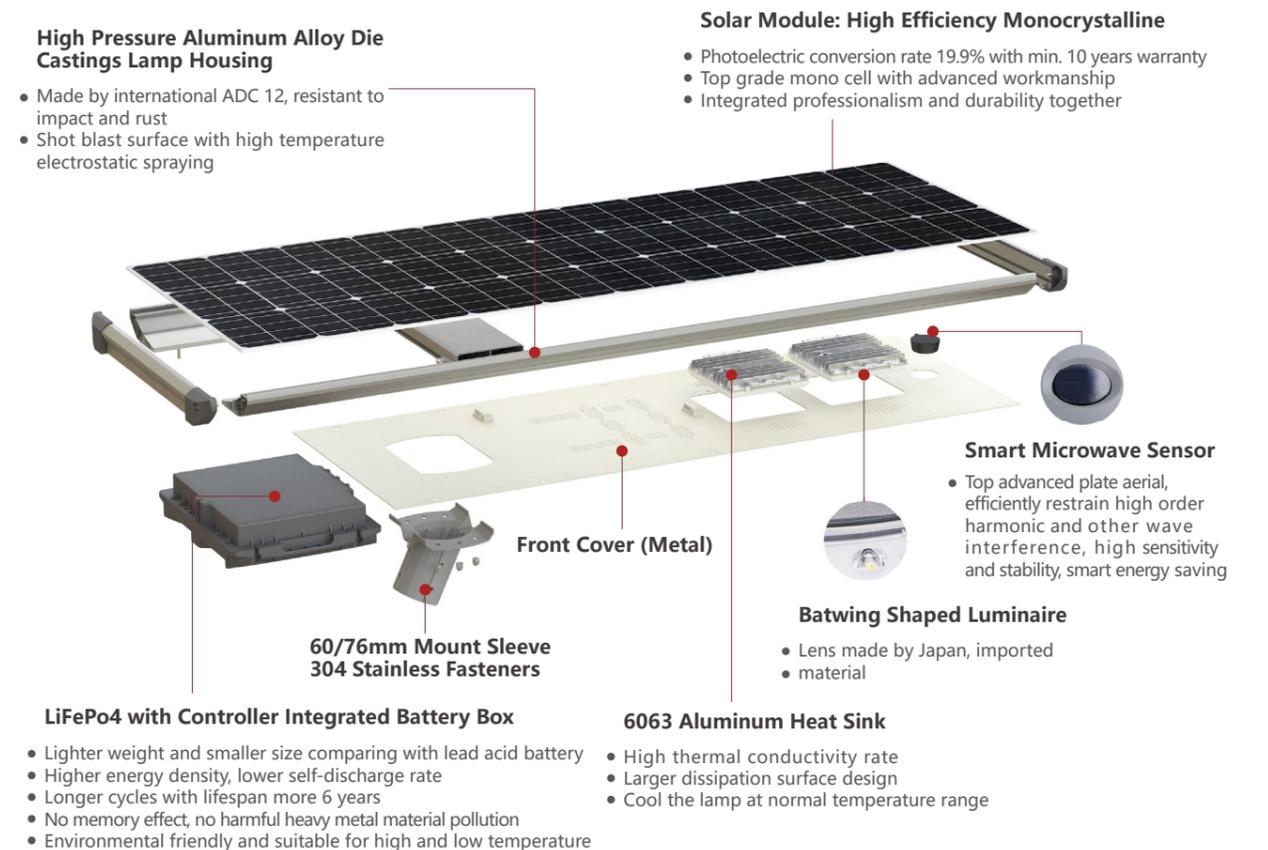
Strong poles are necessary to all solar street lights as there are often solar panels mounted on the top of the pole: fixtures, panels and sometimes batteries. However, in some newer designs, the PV panels and all electronics are integrated in the pole itself. The height and intensity of lamp poles in different application fields are different, so the design should be considered comprehensively.

## ALL-IN-ONE



ALL-IN-ONE solar street light means solar panel, lighting fixture, rechargeable battery are all integrated together. ALL-IN-ONE solar street lights use a microwave induction method to control the on and off of the street light. The microwave induction switch is a moving object detector designed using the principle of the Doppler Effect. It detects whether the position of the object is moving in a non-contact manner, and then generates a corresponding switch operation. The product has strong anti-radio frequency interference ability and is not affected by temperature, humidity, light, air flow, dust, etc. When no one passes by, the street light can automatically adjust to 15% of the actual power operation to save energy. In addition, the control strategy can be reset as needed.

### Key components structure diagram



## Specifications

Model	5/7m 30W	6/7m 40W	6/8m 60W
<b>Solar Panel (Junction Box included)</b>	60Wp, Mono	90Wp, Mono	120Wp, Mono
<b>LED Lamp</b>	30 Watts	40 Watts	60 Watts
	140~150lm/w	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case
<b>Battery</b>	30Ah/12.8V Lithium battery	40Ah/12.8V Lithium battery	50Ah/12.8V Lithium battery
<b>Pole</b>	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)
	Pole Length: 5 /7m Lamp Height: 4.5/6.5m	Pole Length: 6 /7m Lamp Height: 5.5/6.5m	Pole Length: 7 /8m Lamp Height: 5.5/7.5m
<b>Application Reference</b>	Country; Park; Community; Villa district	Country; Urban secondary road	Urban secondary road

Model	7/9m 80W	8/9m 80W	8/10m 120W
<b>Solar Panel (Junction Box included)</b>	160Wp, Mono	18V/240Wp, Mono	18V/240Wp, Mono
<b>LED Lamp</b>	80 Watts	80 Watts	120 Watts
	140~150lm/w	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case
<b>Battery</b>	40Ah/25.6V Lithium battery	60Ah/25.6V Lithium battery	80Ah/25.6V Lithium battery
<b>Pole</b>	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)
	Pole Length: 6 /8m Lamp Height: 5.5/7.5m	Pole Length: 7 /8m Lamp Height: 6.5/7.5m	Pole Length: 8 /10m Lamp Height: 7.5/9.5m
<b>Application Reference</b>	Urban secondary road; Tourist attractions	Urban main and secondary road	Urban main road

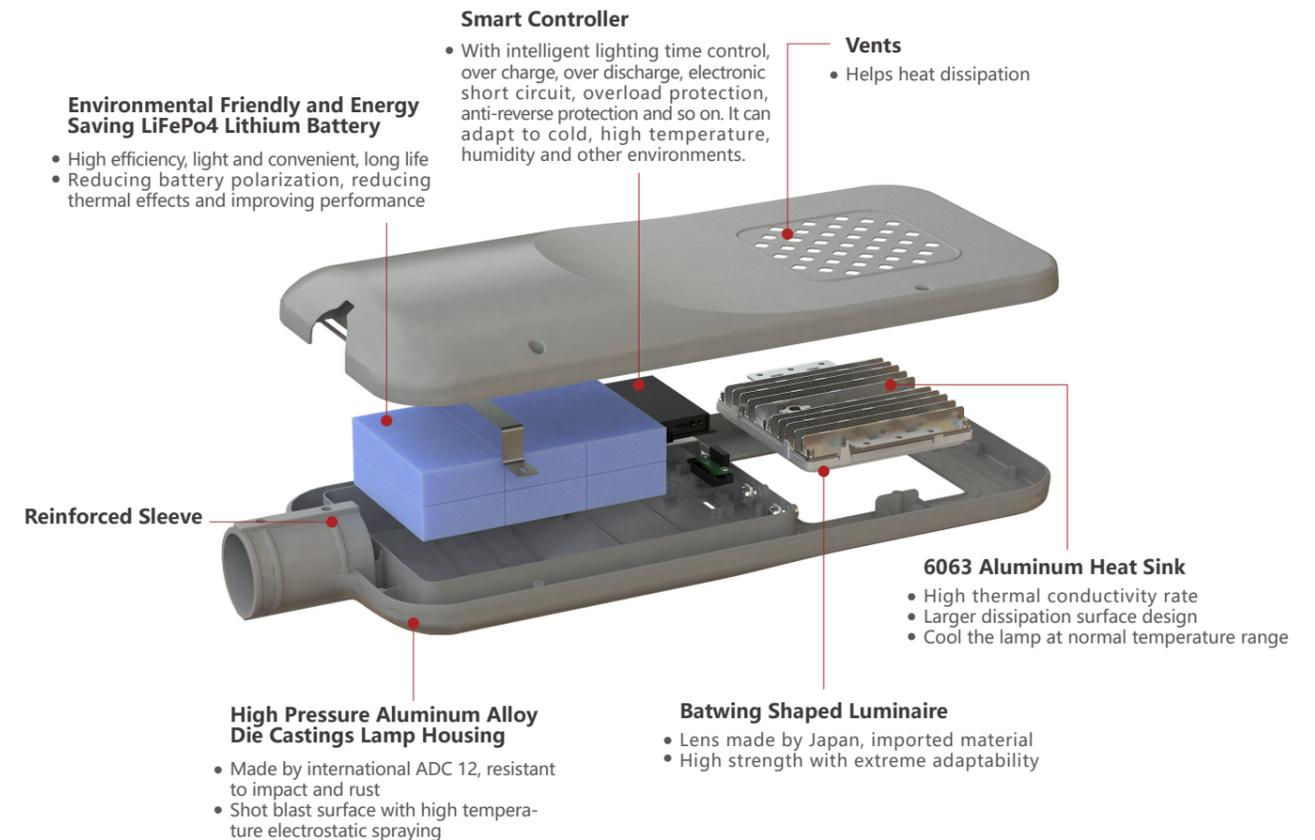
## ALL-IN-TWO



The ALL-IN-TWO solar street light consists of three parts: solar panel, pole and lighting fixture. Moreover, the lighting fixture integrates rechargeable batteries and lamp, as well as other auxiliary accessories.

ALL-IN-TWO solar street light is mainly controlled by the light-controlled time controller to turn on and off. The light-controlled time controller adopts advanced embedded microcomputer control technology, which integrates the two functions of light control function and ordinary time control. According to energy saving needs, the light control probe function and the time control function can be activated at the same time, which will achieve the best energy saving effect. In addition, the ALL-IN-TWO solar street light has a morning mode. The light-controlled time controller can be divided into 4 time periods at most.

### Key components structure diagram



## Specifications

Model	5/7m 20W	6/7m 30W	6/8m 40W
<b>Solar Panel (Junction Box included)</b>	80Wp, Poly	105Wp, Poly	120Wp, Poly
<b>LED Lamp</b>	20 Watts	60 Watts	40 Watts
	140~150lm/w	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case
<b>Battery</b>	30Ah/12.8V Lithium battery	40Ah/12.8V Lithium battery	60Ah/12.8V Lithium battery
<b>Cable</b>	3m 2*1.5mm cable	3m 2*2.5mm cable	3m 2*2.5mm cable
<b>Pole</b>	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)
	Pole Length: 5/7m Lamp Height: 4.5/6.5m	Pole Length: 6 /7m Lamp Height: 5.5/6.5m	Pole Length: 6 /8m Lamp Height: 5.5/7.5m
<b>Application Reference</b>	Park; Community; Country road	Park; Community; Country road	Factory; County-level highway;

Model	6/8m 50W	7/8m 60W	8/10m 70W
<b>Solar Panel (Junction Box included)</b>	160Wp, Poly	180Wp, Poly	215Wp, Poly
<b>LED Lamp</b>	50 Watts	60 Watts	70 Watts
	140~150lm/w	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case
<b>Battery</b>	50Ah/12.8V Lithium battery	60Ah/12.8V Lithium battery	70Ah/12.8V Lithium battery
<b>Cable</b>	3m 2*2.5mm cable	3m 2*2.5mm cable	3m 2*2.5mm cable
<b>Pole</b>	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)
	Pole Length: 6/8m Lamp Height: 5.5/7.5m	Pole Length: 7 /8m Lamp Height: 6.5/7.5m	Pole Length: 8 /10m Lamp Height: 7.5/9.5m
<b>Application Reference</b>	County-level highway; Urban secondaryroad	County-level highway; Urban secondaryroad	Urban main and secondary road

## ALL-IN-THREE



ALL-IN-THREE solar street light has four parts: solar panel, lighting fixture, rechargeable battery and pole. The control logic of ALL-IN-THREE is similar to that of ALL-IN-TWO. They both use light-controlled time controller to control the on and off, with a maximum of 4 periods settings.

## Specifications

Model	5/6m 30W	6/7m 40W	8/10m 40W
<b>Solar Panel (Junction Box included)</b>	80Wp, Poly	105Wp, Poly	160Wp, Poly
<b>LED Lamp</b>	30 Watts	40 Watts	60 Watts
	140~150lm/w	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case
<b>Battery</b>	30Ah/12.8V Lithium battery	40Ah/12.8V Lithium battery	60Ah/12.8V Lithium battery
<b>Cable</b>	6m 2*1.5mm cable	6m 2*1.5mm cable	6m 2*2.5mm cable
<b>Pole</b>	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)
	Pole Length: 5/6m Lamp Height: 4.5/5.5m	Pole Length: 6 /7m Lamp Height: 5.5/6.5m	Pole Length: 8 /10m Lamp Height: 7.5/9.5m
<b>Application Reference</b>	Park; Community; Country road	Country road; Community; Park	Factory; County-level highway; Urbansecondary road

## SOLAR GARDEN LIGHT

Model	10/12m 80W	10/12m 100W	10/12m 120W
<b>Solar Panel (Junction Box included)</b>	2*150Wp, Poly	2*150Wp, Poly	2*180Wp, Poly
<b>LED Lamp</b>	80 Watts	100 Watts	120 Watts
	140~150lm/w	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case	10A/12V waterproof solar charge controller,. Combined into battery case
<b>Battery</b>	80Ah/12.8V Lithium battery	2*50Ah/12.8V Lithium battery	2*60Ah/12.8V Lithium battery
<b>Cable</b>	6m 2*2.5mm cable	6m 2*2.5mm cable	6m 2*2.5mm cable
<b>Pole</b>	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)	Material:Q235 steel (Hot-dip Galvanized with powder coat)
	Pole Length: 10 /12m Lamp Height: 9.5/11.5m	Pole Length: 10 /12m Lamp Height: 9.5/11.5m	Pole Length: 10 /12m Lamp Height: 9.5/11.5m
<b>Application Reference</b>	Factory; Urban main and secondary road	Industrial park; Urban roads; Arterial road	City road; Main road



A solar garden light is a kind of ALL-IN-ONE street light. The main difference is low power, low lighting, easy installation, and it is mainly suitable for garden or courtyard lighting in private houses. It is usually installed on a wall or light pole near an outdoor path or driveway to provide visibility into dark areas or darkened areas at certain times.

### Advantage

- Intelligent control system, lighting on demand, reducing lamp power consumption
- Simple assembly, convenient installation and maintenance
- Long and safe battery life
- High cycle times, economical and practical

### Reference photo



## Specifications

Model	15W	20W
<b>Solar Panel</b> (Junction Box included)	17Wp, Poly	60Wp, Poly
<b>LED Lamp</b>	15 Watts	30 Watts
	140~150lm/w	140~150lm/w
	3000~5700K color temperature	3000~5700K color temperature
<b>Controller</b>	10A/3.2V waterproof solar charge controller, Combined into battery case	15A/3.2V waterproof solar charge controller, Combined into battery case
<b>Battery</b>	25Ah/3.2V Lithium battery	62Ah/3.2V Lithium battery
<b>Material</b>	Aluminum alloy material, anodized surface treatment	Material:Q235 steel (Hot-dip Galvanized with powder coat)
<b>Installation</b>	Wall-mounted type: fixed with swelling screws; hoop type: diameter 48mm and length 300mm	Wall-mounted type: fixed with swelling screws
<b>Application Reference</b>	Villa courtyard lighting, garden lighting	Villa courtyard lighting, garden lighting

## PROJECT REFERENCE



**Project Site:** Premium Food LTD. Kumasi, Ghana  
**Product Parameters:** 60W/ 6m and with Lithium battery  
**Application Environment:** Industrial plants



**Project Site:** Algeria  
**Product Parameters:** 30W/ 45W/ 60W with GEL battery  
**Application Environment:** Municipal Road