

Jiangsu SOKOYO Solar Lighting Co.,Ltd.

# COOLEX 40W All In One Solar Street Light



## Component List for Each Nos

NO.	Component	Description	Qty
1	All-in-one Lamp	COOLEX 40W (Integrated with solar panel, battery, controller)	1set
2	Installation Sleeve	Dia. 76mm	1pc

## Product Design Diagram(The motion sensor is optional)



## Introduction

The SOKOYO COOLEX ALL-IN-ONE Solar Street Light is constructed with a high-efficiency mono-crystalline solar PV module, a lithium ferro phosphate battery with built-in BMS technology, a LUMILEDS LED chip, a smart solar charge controller, and a strong die-cast aluminum body. It is widely used for lighting projects on roads, streets, factories, parking lots, rural mountainous areas, and remote areas.

## Product Advantage

The appearance design is patented, integrated, and exquisite.

Replaceable battery and control box, can be high sky change.

Microwave induction, intelligent control, and programmable DIM mode brightness.

Strong lamp holding to keep the strong wind at bay.

5 year warranty

## Product Specification

Model No.	KY-Y-YJ112.040
Rated Lamp Wattage	40W(1pc LED module)
Solar Panel	Mono crystalline 105W/18V
Lithium Battery	LifePO4 42AH/12.8V(537.6WH)
Controller	MPPT, 15A, 12V/24V(No motion sensor)
Light Distribution	Bat-wing(150°x75°)
LED Chips	PHILIPS LUMILEDS 5050
Lighting Efficiency	≥160lm/W
Luminous Flux	≥6000lm
Color Temperature	4000K
CRI	≥Ra70
IP Rate	IP65
IK Rate	IK08
Working Temperature	-10℃~+60℃
LED Lifespan	>50000 hours
Mounting Diameter	Ø76mm
Lamp Weight	20.0Kg(Reference only,excluding the sleeve weight)
Lamp Dimension	1060*590*155mm
Lamp Packing Dimension	1130*660*250mm(1pc/CTN)
Holder Packing Dimension	To be offered later

## Working Mode

Autonomy Time: 1.89 days;

Working hours per night: 12 hours

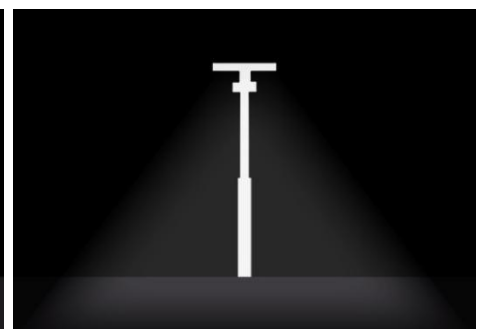
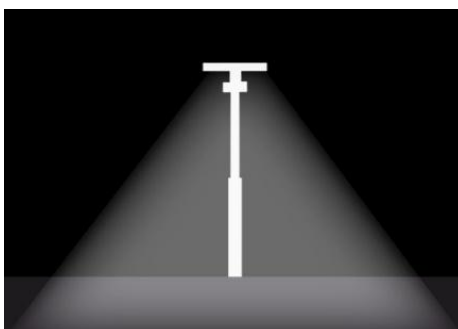
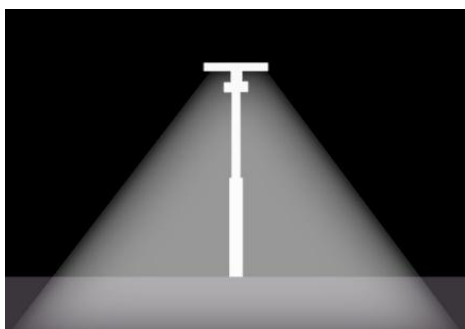
Different brightness for working hours:

5 hours 100% + 7 hours 30%

100%

50%

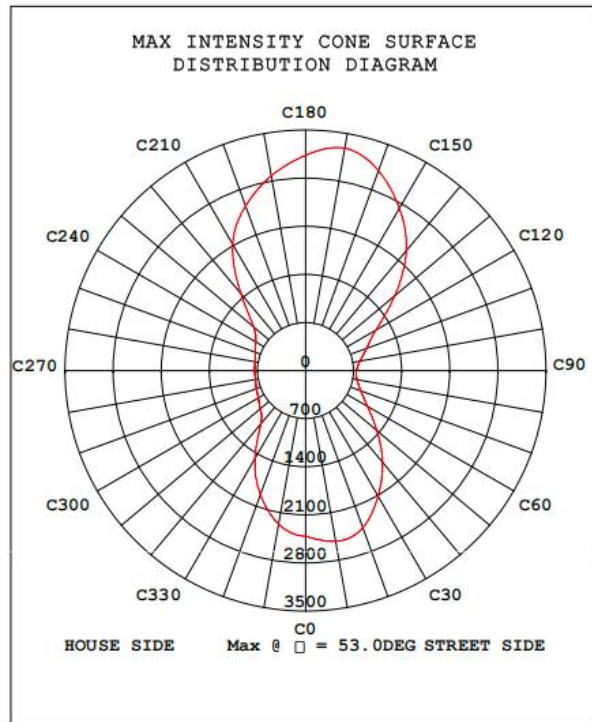
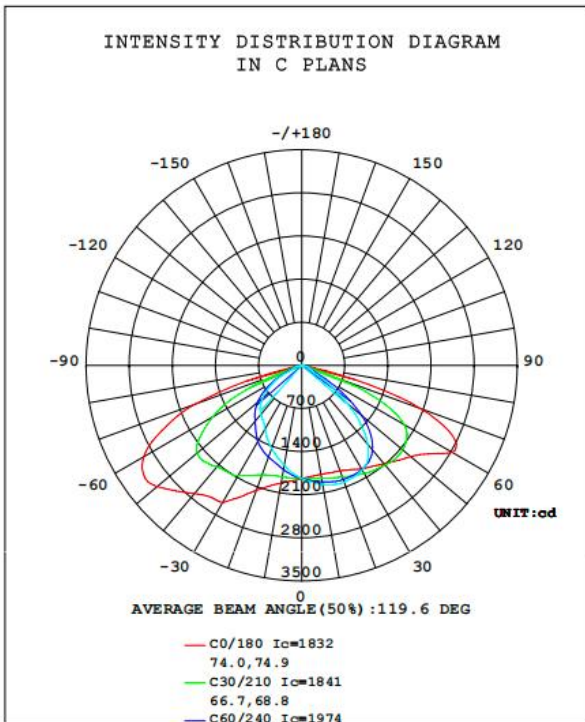
30%



### STREETLIGHT PHOTOMETRIC TEST REPORT

NAME: 横模-40W	TYPE: TS-2C14B-5050	WEIGHT:
SPEC.: 2C14B-5050	DIM.:	SERIAL No.:
MFR.: sokoyo	SUR.: 0.21*0.0.05	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 168.14 lm/W			
MODEL	TS-40W	Imax(cd)	3287	<input type="checkbox"/> street_up(%)	0.0
NOMINAL POWER(W)	40	LOR(%)	100.0	<input type="checkbox"/> street_down(%)	55.6
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	6726	<input type="checkbox"/> house_up(%)	0.0
NOMINAL FLUX(lm)	6725.78	MAXIMUM @ (C, $\square$ )	170,53.0	<input type="checkbox"/> house_down(%)	44.4
LAMPS INSIDE	1	<input type="checkbox"/> up(%)	0.0	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	45.7	<input type="checkbox"/> down(%)	100.0	SLI	18.056

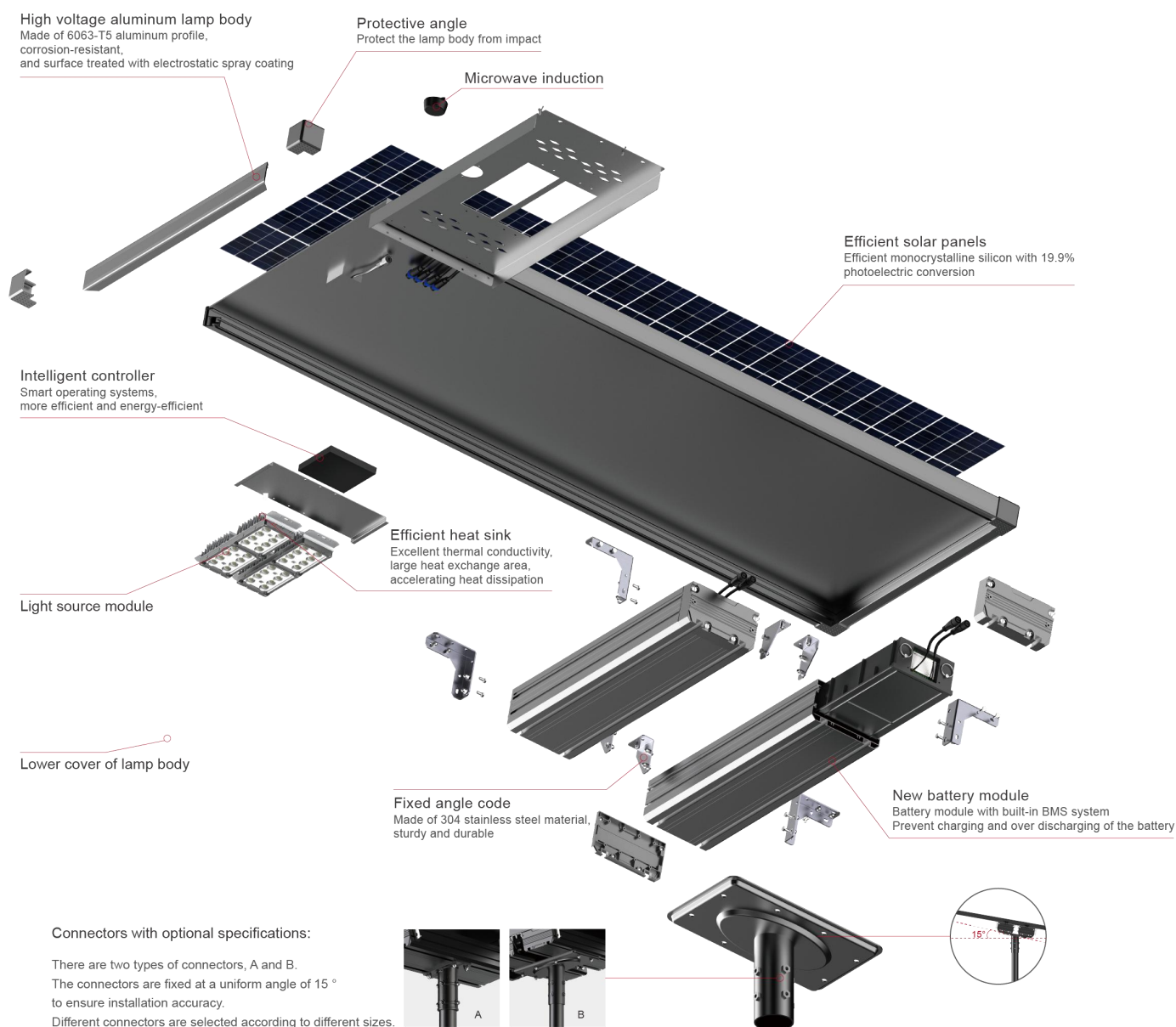


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:37.2℃  
Operators:001  
Test Date:2022-08-03

$\square$  Range: 0 - 90DEG  
 $\square$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000 SYSTEM V2.00.460  
Humidity:47%  
Test Distance:9.400m [K=1.0000]  
Remarks:



## Lamp Structure Diagram(The motion sensor is optional, 1pc LED and 1pc battery box only)



### Screw design to flip the cover and release the shaft quickly

The lamp cover can be opened and closed with a large aperture and can be opened at any angle.  
Quick shaft releasing screw design, no need for tools, can be opened manually with bare hands, classic shaft design, rotating to open, tool free operation, easy to repair, maintain,

## Battery Box Details

### Portable power module design:

Utility model patented product: Portable power module, with high-strength plastic inner shell to fix the battery and prevent it from loosening easily;  
The shell is made of metal material to protect the internal structure of the battery; Soft pack batteries/flat headed cells can be installed;  
Built in BMS system, intelligent battery management, preventing overcharging and discharging, and extending service life;  
The top cover adopts quick detachable shaft screws and a modular design; No tools for installation and maintenance is required, convenient and fast.

Appearance Patent Number:202230071070.2

Utility Model Patent Number: 202220656196.X



The top cover of the shell does not require tools and is easy to operate

Waterproof connector

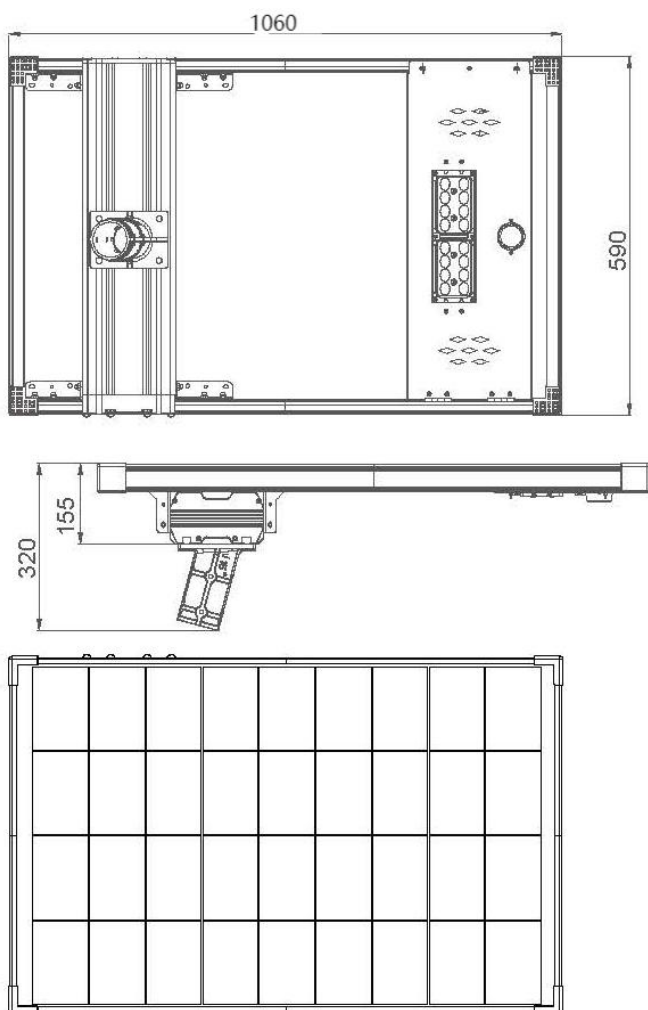
The plastic inner shell is fixed to the battery without loosening

Quick-release shaft screw

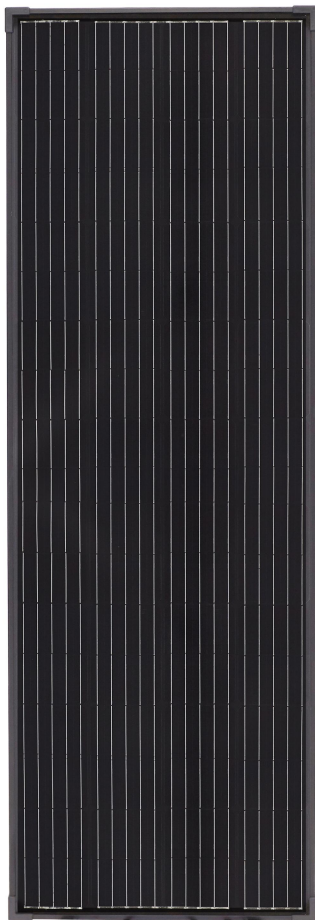
Metal pull ring

The metal shell partially protects the internal structure from compression

### Lamp Dimension(The motion sensor is optional)



## Solar Panel Technical Parameters



Silicon Type.	Mono crystalline
Pmax	105W
Tolerance	±3%
Vmp	18V
Imp	5.84A
Voc	21.6V
Isc	6.42A
Solar Cell Efficiency	>23%
Operating Temperature	-40℃~85℃
Surface Maximum Load	5400Pa
Allowable Hail Load	Ø25mm_23m•s <sup>1</sup>
Life Span	More than 25 years
Decay Rate	Power is more than 90% in 10 years and 80% in 25 years
Certifications	CE, CB
Dimension	590*1060mm



### Aluminum Alloy Frame

Anodized aluminum frame for high corrosion resistance  
Up to 25 years of service life  
Improved load resistance capabilities for heavy wind loads



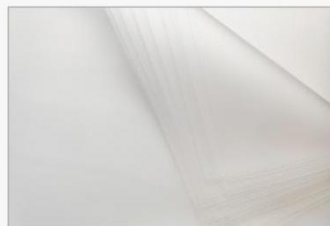
### Protect Corner

Protect the solar panel frame during transportation  
Does not deform under the action of external force  
Protect the safety of the installer during the installation process



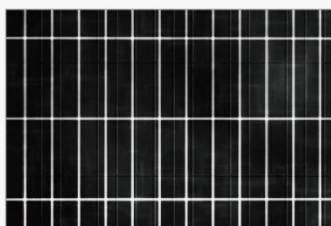
### High Transmission Low Iron Tempered Glass

3.2mm thickness  
>91% higher light transmittance  
Work normally under 5400Pa snow load  
High mechanical strength



### EVA

>91% higher light transmittance  
Higher gel content to provide good encapsulation  
And protect cells from vibration with longer durability



### Monocrystalline Silicon Cell

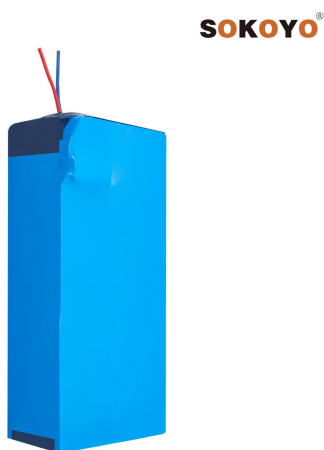
Grade A monocrystalline silicon cell, neatly welded  
High photoelectric conversion efficiency, efficiency ≥ 23%



### Polycrystalline Silicon Cell

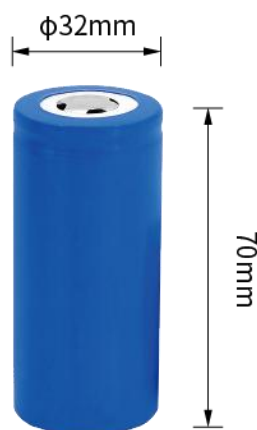
The polycrystalline silicon cell is welded neatly  
Energy saving, environmental protection, efficiency ≥ 19%

## LifePO4 Battery Technical Parameters



	Leak-proof
	Safe, stable and highly recyclable
	Free maintenance
	Long cycle life
	Easy operation in most temperatures

## LifePO4 32700 Cell



The brand new lithium iron phosphate battery has a long service life, with a deep life of more than 2000 cycles. Under the same conditions, the lithium iron phosphate battery can be used for 7-8 years. The lithium iron phosphate battery has undergone strict safety tests, without high risk of explosion; Phosphate Iron-lithium batteries are green, with a wide range of raw materials and affordable prices.

Battery Cell Type	Deep-Cycle Lithium Iron Phosphate
Nominal Capacity	42AH
Voltage	12.8V
Capacity in WH	537.6WH
Assembly Method	4S7P
Safety System	Built-in BMS
Cycle Life	≥2500 cycles@90% DOD for single cell



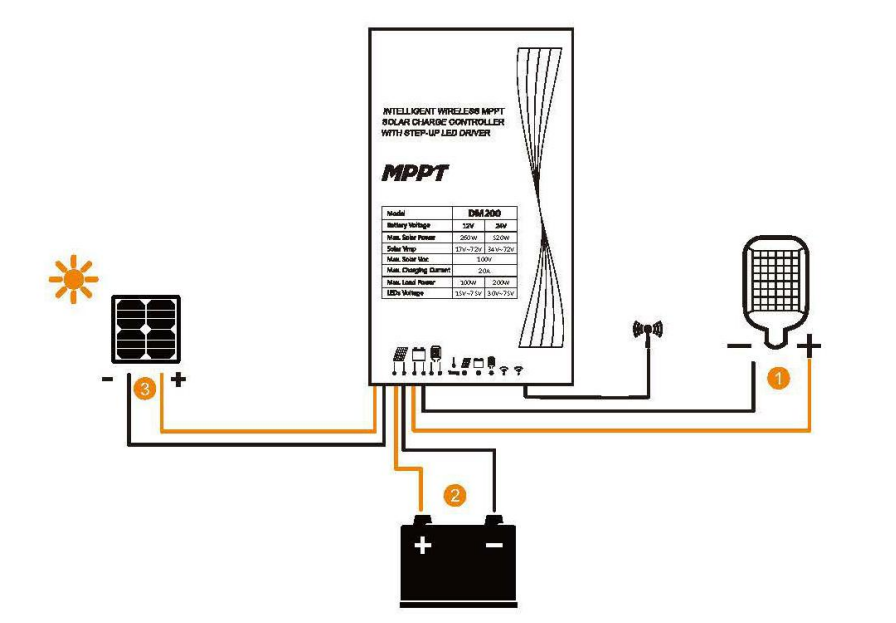


## Features

1. Using MovingTrack MPPT maximum power tracking technology, higher tracking efficiency and faster speed;
2. Both lead-acid battery and lithium battery are applicable, operating parameters can be set by remote control;
3. Using UltraGreen power control technology with extremely low power consumption and sleep current
4. Lead-acid battery multi-stage constant voltage charging with temperature compensation;
5. 10-period programmable load power/time control;
6. Battery charge and discharge high and low temperature protection, with operating temperature settable;
7. A variety of intelligent power modes are available for choice, with load power adjustable automatically according to the battery level;
8. High precision digital step-up constant current control algorithm, ensuring high efficiency and high constant current accuracy;
9. Infrared wireless communication, allowing for setting/reading parameters, reading status, etc;
10. Multiple protections such as battery/PV reverse polarity protection, LED short-circuit/open-circuit/limited power protection, etc;
11. Extensible to IoT remote communication monitoring function;
12. Full aluminum housing, IP67 waterproof rating, applicable to a variety of harsh environments.

Brand Type	PWM, DM160 / KM160	
No Load Loss	18mA for 12V system	13mA for 24V system
System voltage	12V/24V	
Solar Energy Input Voltage	≤60V	
Rated Charging Current	15A	
Load Output Voltage	15V~60V	
MPPT Tracking Efficiency	>99%	
Ambient Temp. Range	-35 °C ~ +65°C	
Max. Solar Panel Power	2000W/12V	400W/24V
Max Load Power	80W/12V	160W/24V
IP Rate	IP67	
Life Span	>5 years	
Working Principle	Light switch-on & time switch-off	
Energy Saving Mode	9-period Energy Saving Mode available	
Remote Control	Wireless remote control IR 15 meters signal range workable through metal cases	
Protection Functions	Short-circuit Protection, Reverse Discharging Protection, Polarity Protection, Lightning Protection, Low Voltage load cut-off protection, Over-charge Protection	
Certifications	CE, RoHS	

## Wiring Diagram

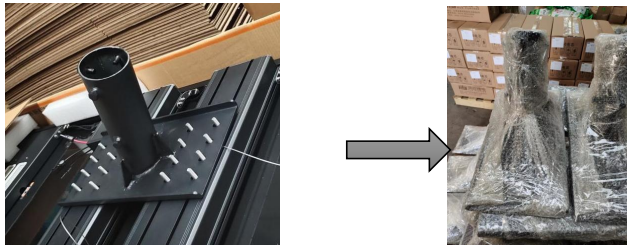


## Packing for each component

All-In-1 Lamp / Packed with CTN



Installation Holder / Packed with bubble film(1pc/Package)



## Installation&Maintenance

Detailed installation manual and installation video will be available after finalizing the order. Besides, we can provide on site installation training and technical assistance.

Our solar street lights are essentially maintenance free. However, in certain regions with heavy dust, snow or extreme dry weather with little rain, some level of maintenance is required.

- Every Week: Inspect street lights to ensure all lights are working. If there are unlit lights, analyze the cause and conduct repairs.
- Every 2~6 Months: Inspect and clean solar panels which are covered with dust or sand. The best tool to clean is a brush with a long pole. Cares should be done to avoid damage
- Every 5-10 Years: Replace the solar street light batteries if the voltage drops below normal levels. The battery has an expected life of 5-10 years.

## Our Service Commitment

- 1.We offer a quality assurance certificate, a thorough installation guide, and common issue fixes.
- 2.We promise that every product is properly inspected, and no subpar products are ever delivered.
- 3.We adhere strictly to the obligations of the after-sales service, warranty coverage, and application of the national regulation for industrial products.
- 4.We will freely recall or replace any defective products, but buyers must submit an application outlining the product's design, material, and manufacturing flaws as well as proof that it was installed and used in accordance with our instructions.
- 5.Since the customer raised a quality objection, we promise to offer a resolution within 48 hours.