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Jiangsu SOKOYO Solar Lighting Co.,Ltd.

CONCO 120W Split Type Solar Street Light

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Component List for Each Nos

NO.	Component	Description	Qty
1	LED Lamp	Lamp Power: 120W	1pc
2	Solar Panel	Mono Panel: 280W/36V	1pc
3	Battery & Controller Integrated Unit	Battery: LifePO4 60AH/25.6V; PWM controller: 20A 12V/24V;	1pc

Product Design Diagram

Introduction

The SOKOYO CONCO Split Style Solar Street Light is made of a strong die-cast aluminum body and a LUMILEDS LED chip. A high-efficiency mono-crystalline solar PV module is used to build the panel. The integrated battery and controller unit is made up of a lithium ferro phosphate battery with built-in BMS technology and a smart solar charge controller. It is widely used for road, street, factory, parking lot, rural mountainous areas, and remote areas lighting projects.

Product Advantage

The appearance design is patented, elegant style, modular integration design.

Easy installation and maintenance.

Strong lamp holding to keep the strong wind at bay.

3 year warranty (5yrs optional).

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Product Specification

Model No.	F-HX-002.120
Rated Lamp Wattage	120W
Solar Panel	Mono crystalline 280W/36V
Lithium Battery	LifePO4 60AH/25.6V(1536WH)
Controller	PWM 20A
Light Distribution	Bat-wing(150°x75°)
LED Chips	PHILIPS LUMILEDS 3030
Lighting Efficiency	≥140lm/W
Luminous Flux	≥16800lm
Color Temperature	3000K/4000K/5700K/6500K
CRI	≥Ra70
IP Rate	IP66
IK Rate	IK08
Working Temperature	-10℃~+60℃
LED Lifespan	>50000 hours
Mounting Diameter	Ø60mm
Lamp Weight	4.6Kg
Lamp Dimension	645*295*144mm
Packing Dimension	700*350*200mm(1pc/CTN)

Working Mode

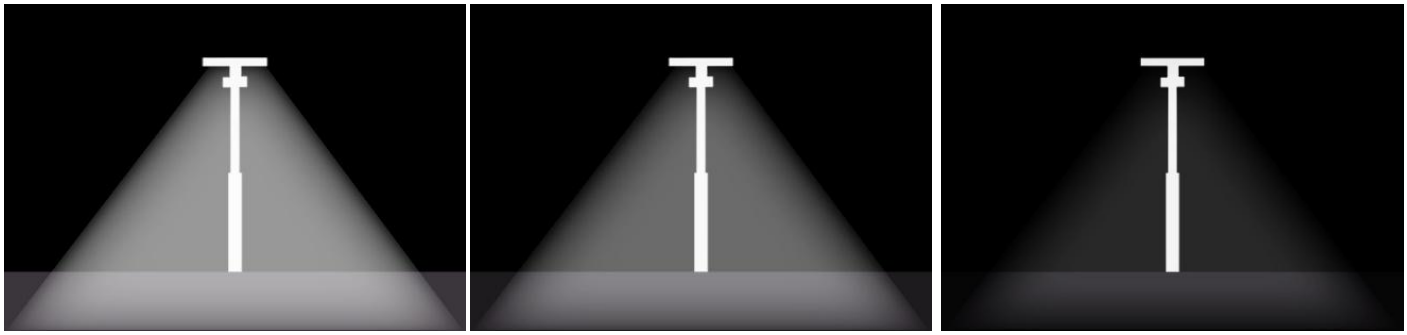
Autonomy Time: 3 days;

Working hours per night: 12 hours

Different brightness for working hours:

0.5 hours 20% + 2 hours 100% + 3 hours 50% + 6.5 hours 20%

100%	50%	20%



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Light Source IES Test Report

EVERFINE 远方

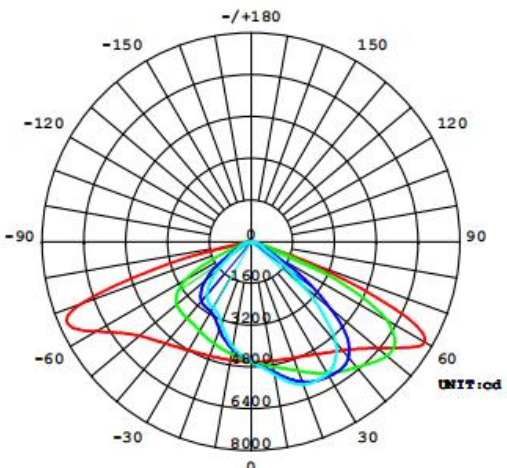
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT Page 1 Of 11

STREETLIGHT PHOTOMETRIC TEST REPORT

NAME: 横模-2模-120W	TYPE:TS-8C8B-3030	WEIGHT:
SPEC.:8C8B-3030	DIM.:	SERIAL No.:
MFR.: sokoyo	SUR.:0.21*0.0.05	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.13 lm/W			
MODEL	TS-120W	Imax(cd)	8244	η street_up(%)	0.3
NOMINAL POWER(W)	120	LOR(%)	100.0	η street_down(%)	60.0
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	16815	η house_up(%)	0.4
NOMINAL FLUX(lm)	8407.63	MAXIMUM @(C,γ)	165,64.0	η house_down(%)	39.3
LAMPS INSIDE	2	η up(%)	0.7	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	49.80	η down(%)	99.3	SLI	17.925

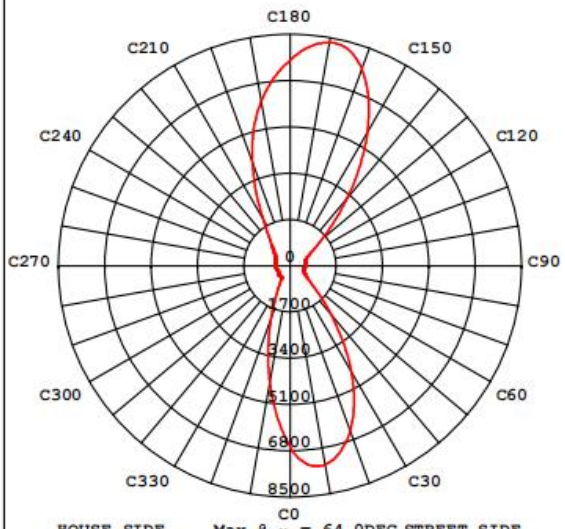
INTENSITY DISTRIBUTION DIAGRAM IN C PLANS



AVERAGE BEAM ANGLE(50%):109.9 DEG

C0/180 Ic=4593
76.3,70.1
C30/210 Ic=6821
55.8,66.3
C60/240 Ic=5978
39.6,53.4
C90/270 Ic=5892
29.5,48.6

MAX INTENSITY CONE SURFACE DISTRIBUTION DIAGRAM



HOUSE SIDE Max @ γ = 64.0DEG STREET SIDE

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:17.2DEG
Operators:001
Test Date:2022-03-21

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.10
Humidity:37%
Test Distance:9.400m [K=1.0000]
Remarks:

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Lamp Structure Diagram

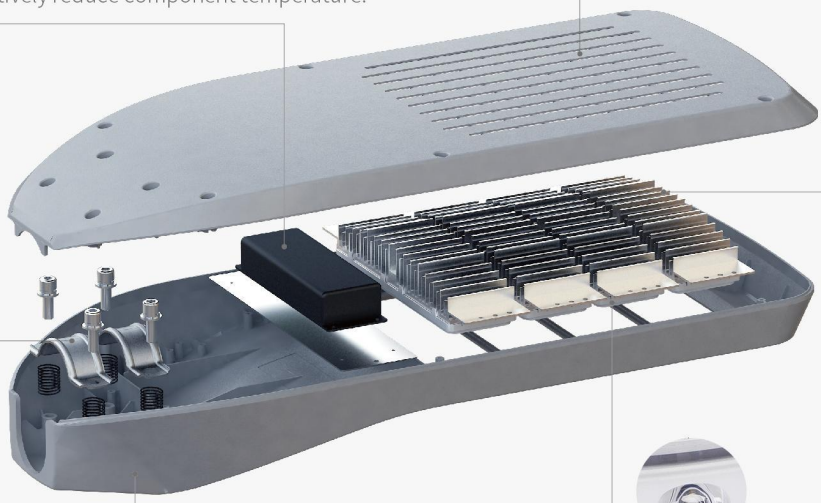
AC power supply (AC only)

Energy-saving, efficient, reliable, long life, IP67 protection, die-cast aluminum shell, good heat dissipation, low power consumption, can effectively reduce component temperature.

Heat emission hole

Help lamps heat.

Reinforce the hedge



6063 aluminum radiator

High thermal conductivity; Large heat dissipation surface design within normal cooling limits.

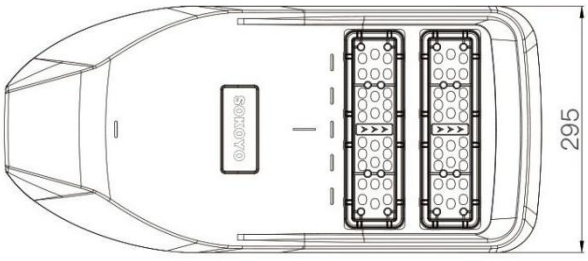
High-pressure cast aluminum lamp body

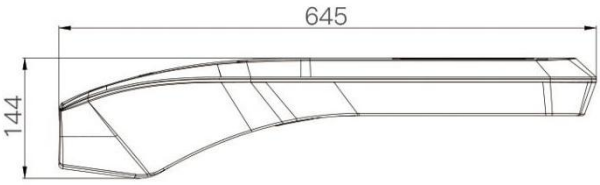
ADC12 high pressure die-cast aluminum molding, impact resistance, corrosion resistance, electrostatic spray treatment after shot blast.

Batwing Lens

The lens is Teijin brand.1225Z is of high strength and high adaptability.

Lamp Dimension





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Solar Panel Technical Parameters

Silicon Type.	Mono crystalline
Pmax	280W
Tolerance	±3%
Vmp	36V
Imp	7.78A
Voc	43.2V
Isc	8.56A
Solar Cell Efficiency	>23%
Operating Temperature	-40℃~85℃
Surface Maximum Load	5400Pa
Allowable Hail Load	Ø25mm_23m•s¹
Life Span	More than 25 years
Decay Rate	Power is more than 90% in 10 years and 80% in 25 years
Certifications	CE, RoHS, IEC61215
Dimension	960*1640*35mm
Net Weight	18.5KG

Aluminum Alloy Frame

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

Protect Corner

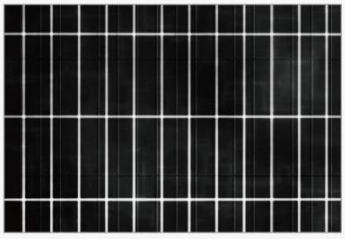
Protect the solar panel frame
during transportation
Does not deform under the action
of external force
Protect the safety of the installer
during the installation process

High Transmission Low Iron Tempered Glass

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

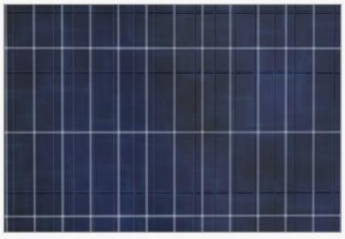
EVA

>91% higher light transmit-
tance
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%

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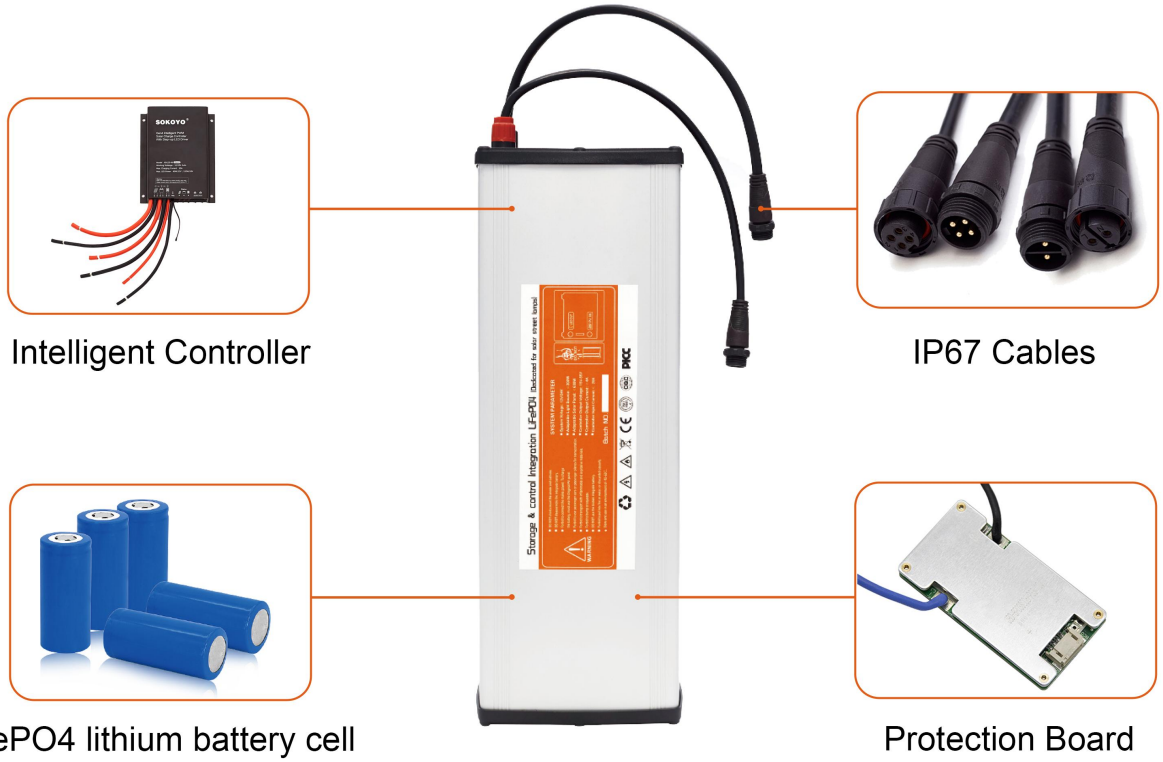
Battery & Controller Integrated Unit



Optional Installation Method

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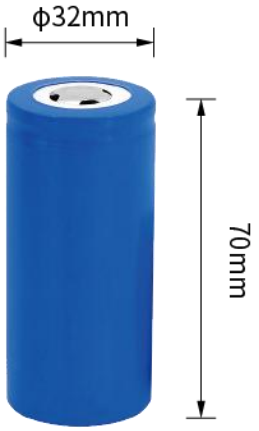
Technical Parameters

LifePO4 Battery Cell(32700 cell)



The 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	60AH
Voltage	25.6V
Capacity in WH	1536WH
Assembly Method	8S10P
Safety System	Built-in BMS
Cycle Life	>2000 cycles@80% DOD

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Intelligent Wireless Solar Street Light Controller

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Features

1.Whole new 2.4G wireless/infrared remote control design allows manual modification of controller parameters and reading of system information.
2.Full digital high precision constant current control, achieving the maximum efficiency of 96%.
3.Human motion infrared/microwave sensing function, with sensing delay time settable.
4.9-Period light dimming and pre-dawn lighting design, working hours settable from 0 hours to 15 hours, power settable from 0% to 100%.
5.Both lead-acid battery and lithium battery are applicable, operating parameters can be set by remote control.
6.A variety of intelligent power modes are available for choice, with load power adjustable automatically according to the battery level.
7.Very low sleep current for long-distance transportation and storage.
8.System status recording allows recording of up to 7 days of system status, realizing full monitoring of the system.
9.Metal shell, IP67 waterproof rating, applicable to a variety of harsh environments.
10.High precision digital step-up constant current control algorithm provides high efficiency and high constant current accuracy, extending the service life of battery.
11.Battery charge and discharge high and low temperature protections guarantee that when the temperature exceeds a certain temperature, the number of loads will be reduced or the load will be turned off.
12.Battery reverse polarity protection, LED short circuit and open circuit protection, etc. are provided for full protection of the system.

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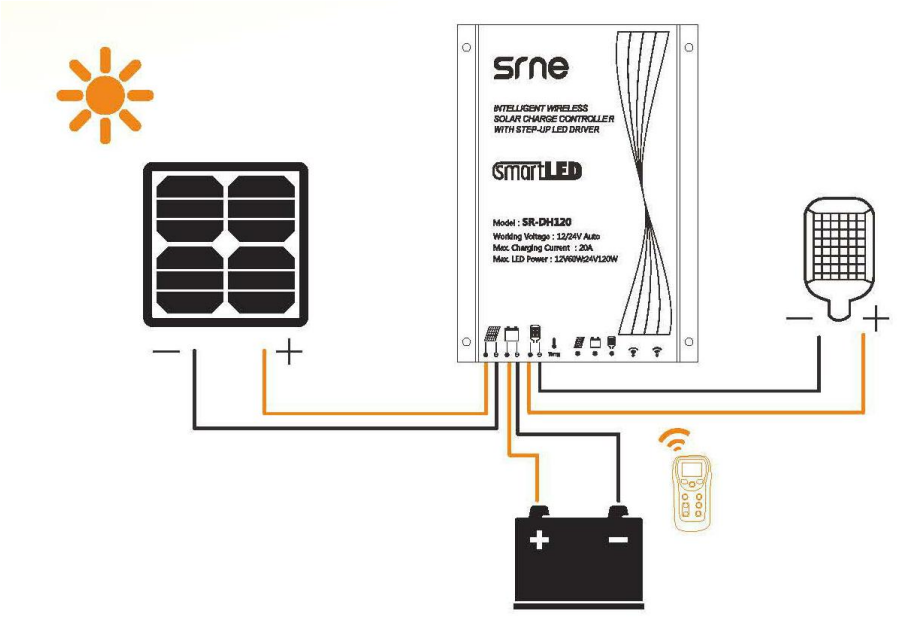
Technical Parameter

Brand Type	PWM, KH120
No Load Loss	11mA for 12V system 21mA for 24V system
System voltage	12V/24V
Solar Energy Input Voltage	25V/12V 55V/24V
Rated Charging Current	20A
Load Output Voltage	15V~60V
Efficiency	90% ~96 %
Ambient Temp. Range	-35 °C ~ +65°C
Max. Solar Panel Power	300W/12V 600W/24V
Max Load Power	60W/12V 120W/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, IEC61215, UL, TUV

Wiring Diagram



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Packing for each component

LED Lamp / Packed with CTN(1pc/CTN)

Solar Panel / Packed with CTN(2pcs/CTN)

Battery & Controller Integrated Unit / Packed with CTN(1pc/CTN)

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 lever 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.