

SZG573 all-in-one solar led street light



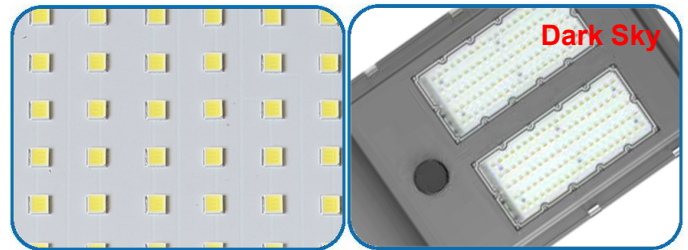
Applications:

- urban and rural roads
- villas and high-end residential roads and gardens
- public park roads
- commercial center roads
- industrial and mining plant road
- roads of tourist attractions
- roads of leisure vacation center

Description of performances:

❖ Super brightness Philips 5050 led chip

- led chip luminous efficiency: **230 lm/W @30mA**
- light efficiency of luminaire: **≥185 lm/W**
- The thermal resistance is only 3°C and 75% lower
- The illuminance is 20%-30% higher
- average service life: **≥100,000 hours**
- **Dark sky design**



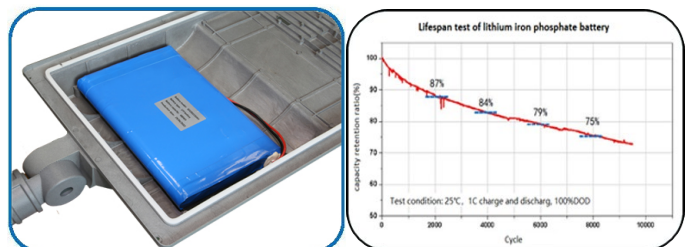
❖ High efficiency solar panel from Taiwan

- mono solar wafers imported from Taiwan
- solar conversion efficiency: **≥21%~22%**
- wafer specification: 156*156 mm
- lifespan: **≥20 years**
- **waterproof by silicon seal strip and snap-fit which is convenient for maintenance.**



❖ Power lithium iron phosphate battery

- used for electric car, electric bike, solar light, energy storage
- cycle life: **≥3000 cycles** for more than 8 years' use
- cell capacity: 6000mAh
- Less than 3mΩ internal resistance can reduce internal energy loss and offer high current discharge.
- High temperature discharge efficiency is over 95%.
- Low temperature discharge efficiency is about 70%.
- free of cobalt and other heavy metals
- no fire, no explosion, absolutely safe and reliable
- **Large battery cavity, battery pack built in the lamp head, beautiful coordination and easy maintenance.**



super brightness



MPPT intelligent solar controller



microwave sensor



Li-battery management system



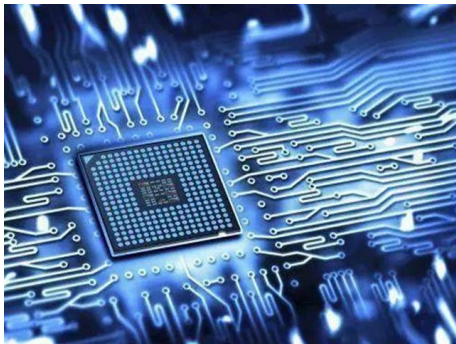
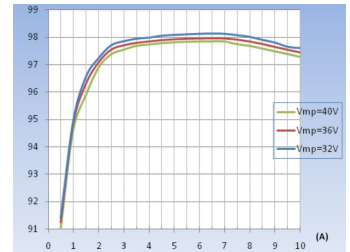
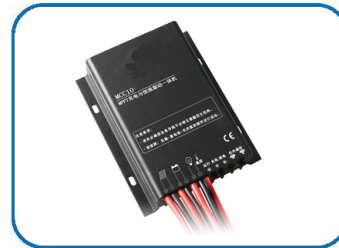
2.4G remote operation



Li-battery monitor system

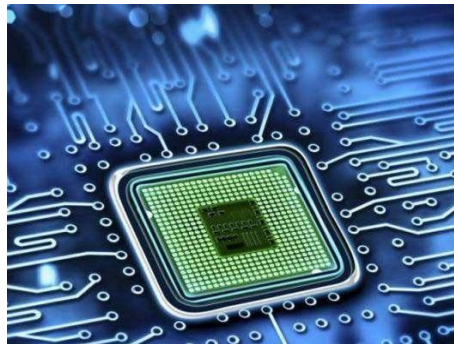
❖ Intelligent solar controller

- adopting MPPT technology to track the maximum power of solar panel
- MPPT efficiency: $\geq 99.9\%$
- charge conversion efficiency: $\geq 98.5\%$ (MPPT)
- constant current drive efficiency: $\geq 96\%$ (MPPT)
- IPT(intelligent power technology) can adjust the optimal power according to the weather conditions of the next 7 days and the remaining energy of the battery to ensure 365 days' lighting every day
- control mode: light control, time control, induction control
- 2.4G remoter optional
- **Solar controller is built in the shell of lamp.**



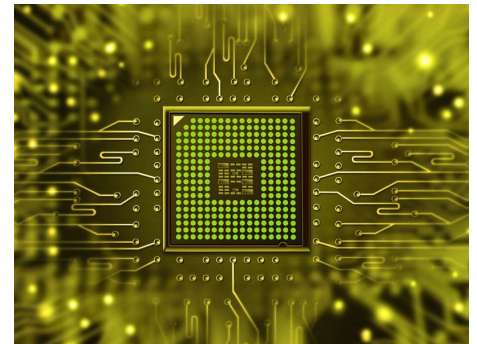
Intelligent power technology

According to the weather conditions of the next 7 days and the remaining energy of the battery, the power of the light can be adjusted to the optimal value through automatic calculation and scientific evaluation under the premise of ensuring the illumination to meet lighting for 365 days and extend cycle life of battery.



Single Monitoring and balanced charging Technology :

Through monitoring the voltage and current of the single cell in real time and optimizing the calculation, solar controller outputs the optimal charging voltage and current to reach the balanced charging for each cell which will prolong lifespan of battery.

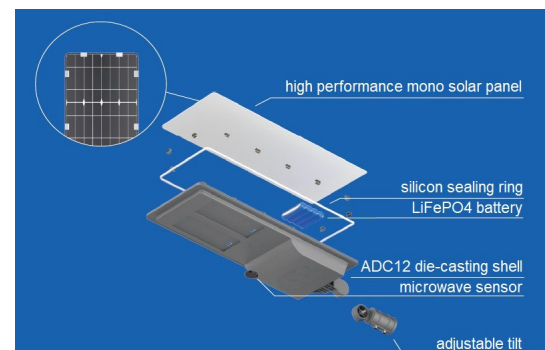


Automatic alarm technology:

Collecting the output voltage and current of solar panel, the voltage and current of battery and led modular in real time by intelligent chip, the working state of each part is detected and judged, and the fault alarm occurs automatically. Through different indicator lights, it is convenient for maintenance personnel to judge the problem intuitively and quickly.

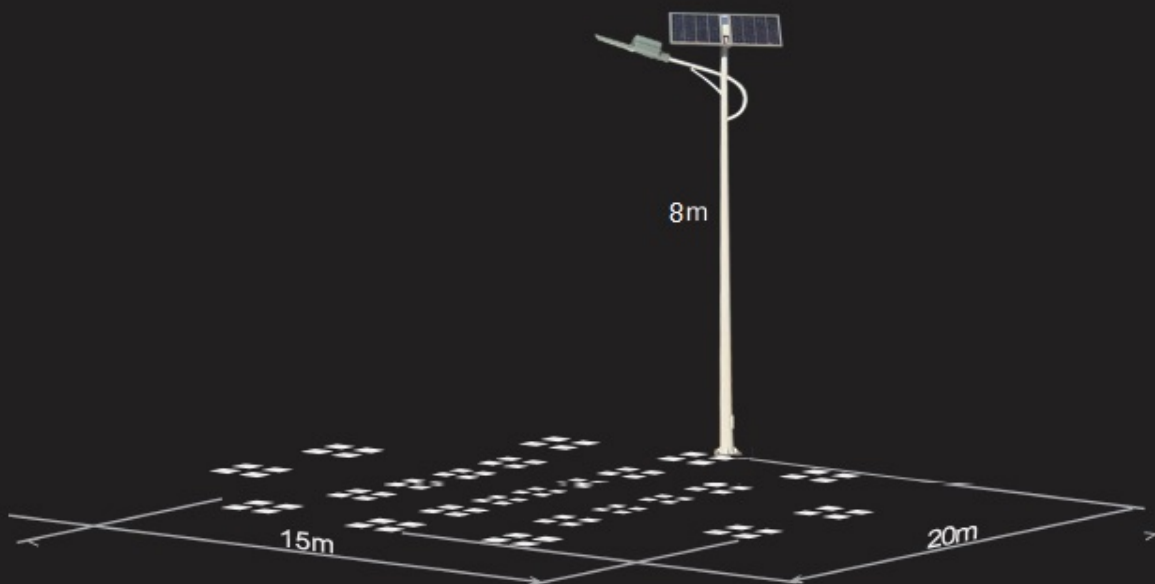
❖ ADC12 die-casting shell and silicon sealing ring

- ADC12 die-casting aluminum shell with thermal efficiency up to 96W/M·K
- Solar panel and housing relies on silicon sealing ring waterproof which is convenient for maintenance.
- **Microwave sensor for more energy-saving**
- **Adjustable tile for mounting on different poles**
- IP protection: IP66



Microwave sensor

Microwave sensors *detect* the human body motion by emitting high-frequency radio waves. When human motion is detected, the microwave sensor is triggered and the lamp becomes 100% brightness. When the human body has left the lamp, the microwave sensor closes the trigger and the lamp becomes weak light, which can extend the lighting time.



only for reference

Product overview:



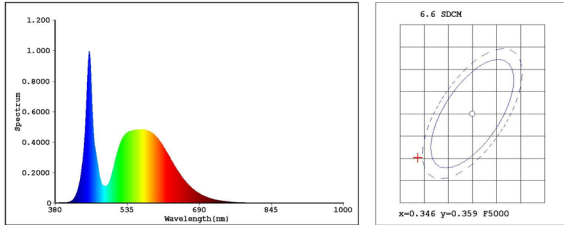
Technical parameters:

Model & power	SZG573-45W	SZG573-80W	SZG573-120W
Brand of led chip	Philips	Philips	Philips
Quantity of 5050 led chip (pcs)	60 pcs	100 pcs	200 pcs
Luminous efficiency for led (lm/W)	230 lm/W	230 lm/W	230 lm/W
Light efficiency for luminaire (lm/W)	185 lm/W	185 lm/W	190 lm/W
Beam angle	140°*70°	140°*70°	140°*70°
Correlated color temperature (K)	3000-6500K	3000-6500K	3000-6500K
Color rendering index (Ra)	≥75Ra	≥75Ra	≥75Ra
LED lifespan (h)	100000 hrs	100000 hrs	100000 hrs
Type of battery	LFP battery	LFP battery	LFP battery
Capacity of battery	100Wh	190Wh	380Wh
Lifespan of battery	≥3000 cycle	≥3000 cycle	≥3000 cycle
Charging time (h)	6-7 hrs	6-7 hrs	6-7 hrs
Microwave sensor	optional	Optional	optional
Mono solar panel	15W	25W	60W
Dark sky requirement	yes	yes	yes
Adjustable tilt	yes	yes	yes
Material of shell	die-casting aluminum	die-casting aluminum	die-casting aluminum
Lighting time per day	12 hrs	12 hrs	12 hrs
Continuous rainy day	2-3 days	2-3 days	2-3 days
Discharging temperature	-20~+55℃	-20~+55℃	-20~+55℃
IP protection	IP66	IP66	IP66
Dimension	610*230*80 mm	750*280*80 mm	1050*400*95 mm
Weight	5 Kg	7.5 Kg	11 Kg
Diameter of mounting pipe	Φ50 mm	Φ50 mm	Φ60 mm
Recommended mounting height	5 m	6-7 m	7-8 m

Note: Selecting the power of lamp refers to the recommended installation height in the table.

Test report for led chip:

Spectrum Test Report



Color Parameters:

Chromaticity Coordinate(2Deg):x=0.3347 y=0.3492/u'=0.2053 v'=0.4819 duv=3.134e-003
 Tc=5410K Dominant WL:Ld=558.0nm Purity=5.2%
 Ratio:R=14.0% G=82.2% B=3.8% Peak WL:Lp=453.1nm HWL:17.2nm
 Render Index:Ra=75.9
 R1 =73.76 R2 =81.05 R3 =84.21 R4 =75.46 R5 =73.73
 R6 =72.76 R7 =84.81 R8 =61.67 R9 =-15.45 R10=52.76
 R11=71.59 R12=42.32 R13=75.35 R14=90.99 R15=69.42
 TM30 Parameters: Rf = 74.3, Rg:93.3

Photo Parameters:

Flux = 49.14 lm Eff. : 225.42 lm/W P_e = 142.0 mW

Electrical parameters:

VF = 5.466 V IF = 39.90 mA P = 218.0 mW Ch1
 LEVEL:**[OUT] WHITE:ANSI_5700K

Status: T=201.00ms Ip=26653 (41%) [HAAS1200_V1_USB] V2.00.288



Light distribution curve:

