

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:

❖ High brightness 3030 led chip

- led chip luminous efficiency: 240 lm/W @40mA
- light efficiency of luminaire: 200 lm/W
- The thermal resistance is only 3°C and 75% lower
- average service life: ≥100,000 hours
- **Dark sky design**



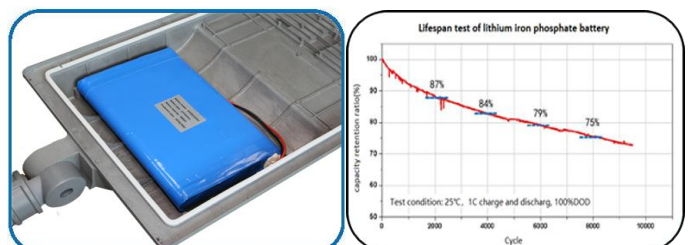
❖ High efficiency mono solar panel

- high efficiency mono solar wafers
- solar conversion efficiency: 23%-24%
- Average attenuation speed per year: 0.6%
- 25 years maximum output power attenuation: 15%
- **waterproof by silicon seal strip and snap-fit which is convenient for maintenance.**



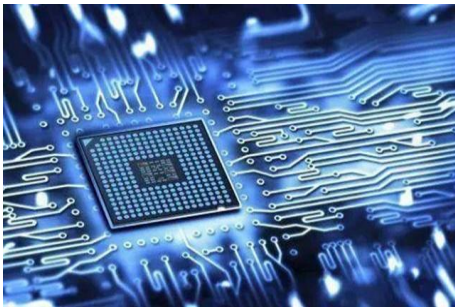
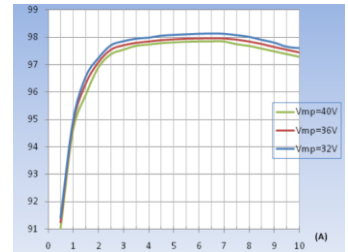
❖ Low temperature powerful lithium iron phosphate battery

- Adopt low temperature powerful lithium iron phosphate battery which can discharge at -25°C reliably.
- cycle life: ≥3000 cycles for more than 8 years' use
- **capacity of grade A new cell (32700): ≥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.**



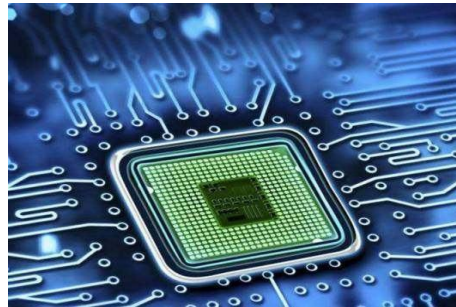
❖ Intelligent solar controller

- 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.**



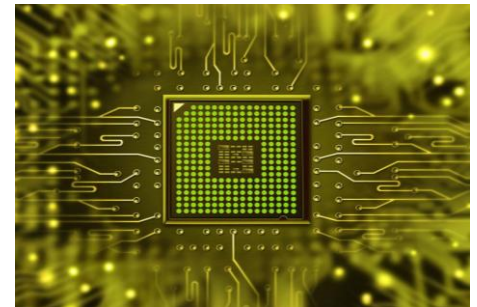
Intelligent power technology:

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.

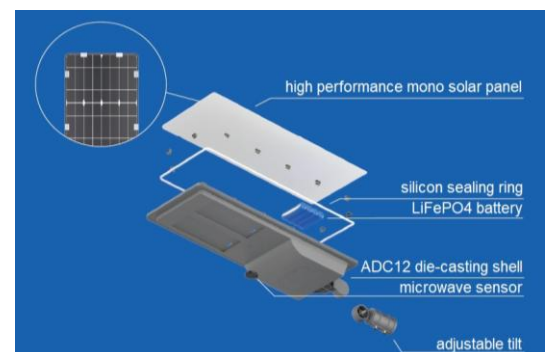


Automatic alarm technology:

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.

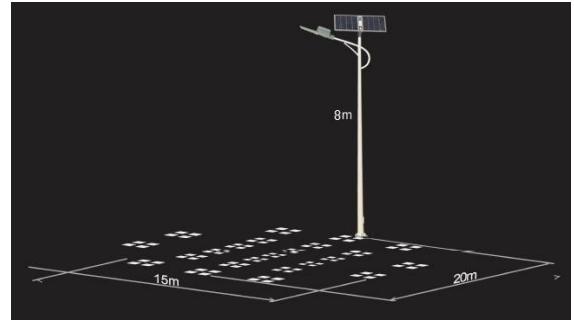
❖ ADC12 die-casting shell and silicon sealing ring

- ADC12 die-casting aluminum shell with thermal efficiency up to 96W/M·K
- Solar panel and housing reliefs 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

The microwave sensor detects the movement of humans or other objects, such as cars, by emitting high-frequency radio waves. When human movement or other moving objects are detected, the microwave sensor is triggered, and the brightness of the lights reaches 100%. If no human movement or other moving objects are detected within a set delay time, the microwave sensor is triggered to turn off, and the brightness of the lights becomes dimmer, thereby extending the lighting time and saving energy.

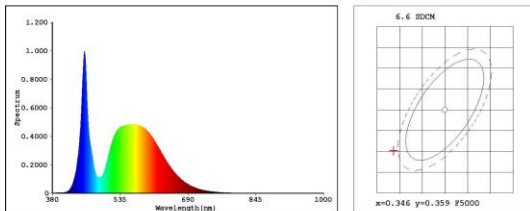


Test report of luminous efficiency for led chip:

EVERFINE 远方

Test report
EVERFINE LEDspec Test Report 4 Of 4

Spectrum Test Report



Color Parameters:

Chromaticity Coordinate(2Deg): $x=0.3347$ $y=0.3492$ / $u'=0.2053$ $v'=0.4819$ $duv=3.134e-003$
 $T_c=5410K$ 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 = 50.96 lm Eff. : 241.29 lm/W Fe = 153.5 mW

Electrical parameters:

VF = 5.294 V IF = 39.90 mA P = 211.2 mW Ch1
 LEVEL:**[OUT] WHITE:ANSI_5700K
 Status: T=201.00ms Ip=26653 (41%) [HAAS1200_V1_USB] V2.00.288



Technical parameters:

Model & power	SZG573-20W	SZG573-30W	SZG573-40W	SZG573-45W
Luminous efficiency for led chip (lm/W)	240	240	240	240
Light efficacy for luminaire (lm/W)	200	200	200	200
Energy efficiency rating	Class 1	Class 1	Class 1	Class 1
Energy saving rate	50%	50%	50%	50%
Luminous flux of luminaire (lm)	4000±5%	6000±5%	8000±5%	9000±5%
Correlated color temperature (K)	3000-6000K	3000-6000K	3000-6000K	3000-6000K
Color rendering index (Ra)	≥75Ra	≥75Ra	≥75Ra	≥75Ra
Beam angle (°)	140°*70°	140°*70°	140°*70°	140°*70°
LED lifespan (h)	≥100000 hrs	100000 hrs	100000 hrs	100000 hrs
Type of battery	LFP battery	LFP battery	LFP battery	LFP battery
Capacity of battery (Wh)	150	250	350	450
Lifespan of battery (cycle)	≥3000	≥3000	≥3000	≥3000
Charging time (h)	6-7	6-7	6-7	6-7
Mono solar panel (W)	25	60	60	60
Microwave sensor	yes	yes	yes	yes
Dark sky requirement	yes	yes	yes	yes
Adjustable tilt	yes	yes	yes	yes
Material of shell	die-casting aluminum	die-casting aluminum	die-casting aluminum	die-casting aluminum
Lighting time per day (h/day)	11	11	11	11
Continuous rainy day (day)	2-3	2-3	2-3	2-3
Discharging temperature (°C)	-25°C - +60°C	-25°C - +60°C	-25°C - +60°C	-25°C - +60°C
Charging temperature (°C)	-10°C~+55°C	-10°C~+55°C	-10°C~+55°C	-10°C~+55°C
IP protection	IP66	IP66	IP66	IP66
Dimension (mm)	750*280*80	1050*400*95	1050*400*95	1050*400*95
Weight (Kg)	7.5	10	11	12
Diameter of mounting pipe (mm)	Φ50	Φ60	Φ60	Φ60
Recommended mounting height (m)	5-6	6-7	7	8
Warranty (year)	5 years	5 years	5 years	5 years

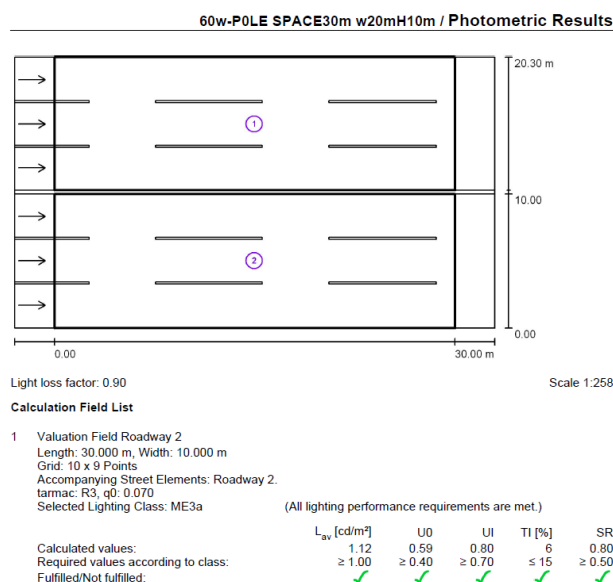
Note: 1. According to GB 30255-2026: the luminous efficacy of Class 1 energy-efficient luminaire is 170-180 lm/W; for Class 2, it is 145-155 lm/W; and for Class 3, it is 100-110 lm/W.

2. Energy saving rate is compared with the conventional luminaire of class 3 energy efficiency rating.

Road lighting simulation calculation:

1. Power of luminaire: 60W

- 1) Road width: 20m
- 2) Pole height: 10m
- 3) Pole spacing: 30m
- 4) Lighting class: ME3a



2. Power of luminaire: 50W

- 1) Road width: 20m
- 2) Pole height: 9m
- 3) Pole spacing: 25m
- 4) Lighting class: ME3a

