

# SZG552 all-in-one solar led street light



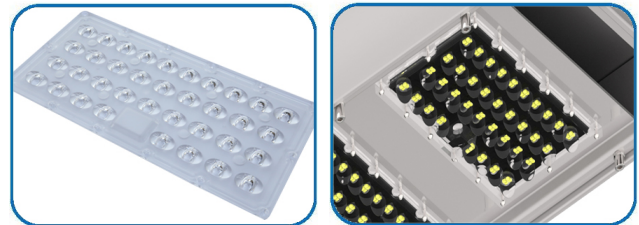
## Applications:

- urban main roads, secondary roads
- county, township, town, village road
- economic development zone and high-tech park road
- industrial and mining plant road
- tourist attractions
- resort road
- park, parking roads
- villas and high-end residential roads

## Description of performances:

### ❖ Super brightness Philips 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 can be custom made.



5050 modular lens

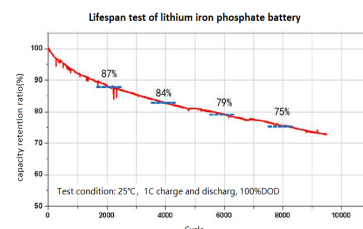
### ❖ High efficiency solar panel from Taiwan

- mono solar wafers imported from Taiwan
- solar conversion efficiency: ≥21%~22%
- wafer specification: 156\*156 mm
- lifespan: ≥20 years



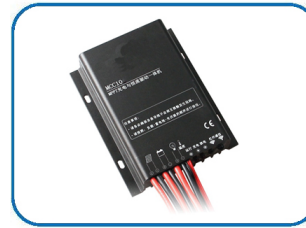
### ❖ Power lithium iron phosphate battery

- 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

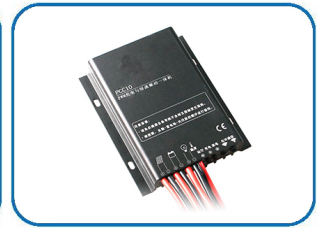


### ❖ Intelligent solar controller

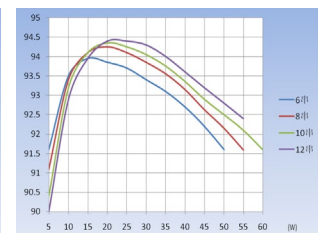
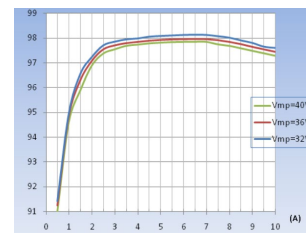
- adopting MPPT technology to track the maximum power of solar panel
- MPPT efficiency:  $\geq 99.9\%$
- charge conversion efficiency:  $\geq 98.5\%$  (MPPT)  
 $\geq 94.5\%$  (PWM)
- constant current drive efficiency:  $\geq 96\%$  (MPPT)  
 $\geq 95\%$  (PWM)
- IPT(intelligent power technology) can 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



MPPT controller

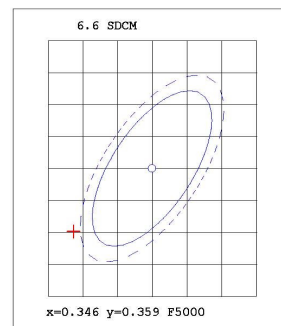
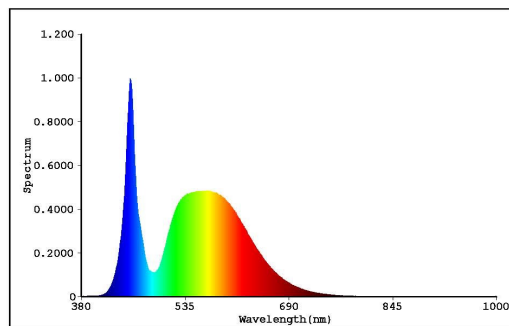


PWM controller



## 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      Fe = 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

## Technical parameters:

Model & power	SZG552-30W	SZG552-45W	SZG552-65W	SZG552-80W	SZG552-100W
Brand of led chip	Philips	Philips	Philips	Philips	Philips
Luminous efficiency for led (lm/W)	230 lm/W	230 lm/W	230 lm/W	230 lm/W	230 lm/W
Total luminous flux (lm)	5000±5% lm	7300±5% lm	10000±5% lm	12500±5% lm	16000±5% lm
Light efficiency for luminaire (lm/W)	185 lm/W	185 lm/W	185 lm/W	185 lm/W	185 lm/W
Beam angle	140°*70°	140°*70°	140°*70°	140°*70°	140°*70°
Correlated color temperature (K)	3000-6500K	3000-6500K	3000-6500K	3000-6500K	3000-6500K
Color rendering index (Ra)	≥75Ra	≥75Ra	≥75Ra	≥75Ra	≥75Ra
LED lifespan (h)	100000 hrs	100000 hrs	100000 hrs	100000 hrs	100000 hrs
Type of battery	LFP battery	LFP battery	LFP battery	LFP battery	LFP battery
Capacity of battery	190Wh	260Wh	380Wh	510Wh	770Wh
Lifespan of battery	≥3000 cycle	≥3000 cycle	≥3000 cycle	≥3000 cycle	≥3000 cycle
Charging time (h)	6-7 hrs	6-7 hrs	6-7 hrs	6-7 hrs	6-7 hrs
PIR sensor	Yes	Yes	Yes	Yes	Yes
Lighting mode	20% (normal) /100% (activated)	20% (normal) /100% (activated)	20% (normal) /100% (activated)	20% (normal) /100% (activated)	25% (normal) /100% (activated)
Mono solar panel	18V30Wp	18V55Wp	18V70Wp	18V90Wp	18V100Wp
Dark sky requirement	custom made	custom made	custom made	custom made	custom made
HD camera	/	/	/	/	/
TF card	/	/	/	/	/
Camera operation time	/	/	/	/	/
Stored days of data	/	/	/	/	/
Angle of camera lens	/	/	/	/	/
Video format	/	/	/	/	/
Communication mode	/	/	/	/	/
Monitoring mode	/	/	/	/	/
Operating control mode	/	/	/	/	/
Operating system of mobile	/	/	/	/	/
Material of shell	aluminum	aluminum	aluminum	aluminum	aluminum
Material of cover for led	PC	PC	PC	PC	PC
Lighting time per day	12 hrs	12 hrs	12 hrs	12 hrs	12 hrs
Continuous rainy day	3-7 days	3-7 days	3-7 days	3-7 days	3-7 days
Discharging temperature	-20~+55℃	-20~+55℃	-20~+55℃	-20~+55℃	-20~+55℃
IP protection	IP65	IP65	IP65	IP65	IP65
Dimension	550*377*252 mm	950*377*252 mm	1196*377*252 mm	1150*460*252 mm	1390*460*252 mm
Weight	13 Kg	15 Kg	17 Kg	21.5 Kg	24.5 Kg
Diameter of mounting pipe	φ60 mm	φ60 mm	φ60 mm	φ60 mm	φ60 mm
Recommended mounting height	5-6 m	6-7 m	8 m	9 m	10 m

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

## Light distribution curve:

