

SZG301SH **ultra-bright** solar led floodlight



Applications:

- Outdoor equipment areas, loading and unloading areas, office and living squares, remote production operation areas for industrial and mining enterprises, etc
- Commercial centers, shopping centers, leisure and entertainment squares, etc
- Outdoor small parking lots
- Outdoor small sports field
- Outdoor construction workplace

Description of performances:

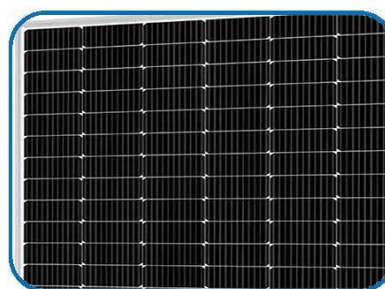
❖ Ultra-bright 3030 led chip

- led chip luminous efficiency: 240-250 lm/W
- light efficacy of luminaire: 195-200 lm/W
- Energy efficiency rating: Class 1
- Energy saving rate: 50%
- The thermal resistance is only 3°C and 75% lower
- average service life: ≥100,000 hours



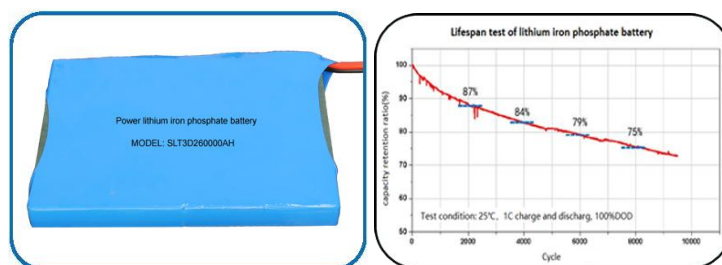
❖ High efficiency mono solar panel

- high efficiency mono solar wafers
- solar conversion efficiency: 23%-24%
- wafer specification: 182*182 mm
- lifespan: ≥25 years
- Average attenuation speed: 0.6%
- 25 years maximum output power attenuation: 15%



❖ 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
- 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

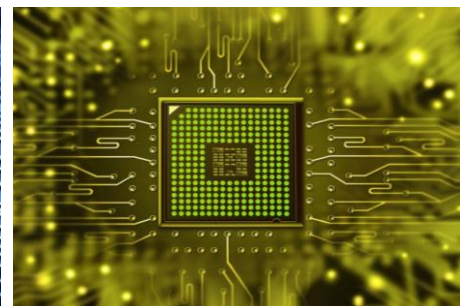
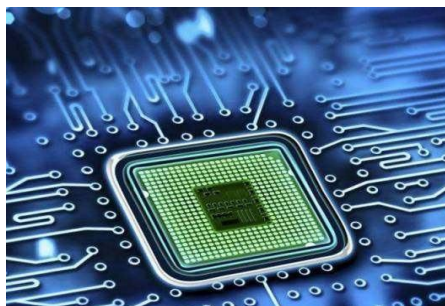
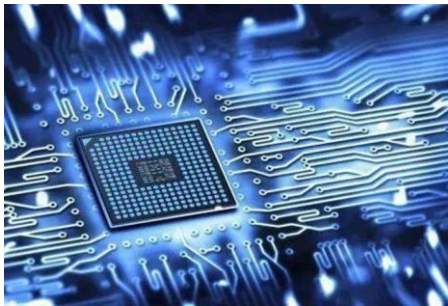
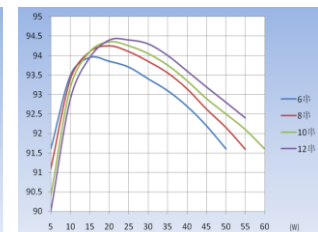
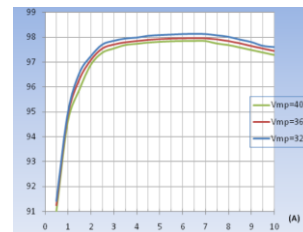
- adopting MPPT technology to track the maximum power of solar panel
- MPPT efficiency: $\geq 99.9\%$
- charge conversion efficiency: $\geq 98.5\%$ (MPPT)
 $\geq 94.5\%$ (PWM)
- constant current drive efficiency: $\geq 96\%$ (MPPT)
 $\geq 95\%$ (PWM)
- IPT(intelligent power technology) can adjust the 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, motion sensor
- 2.4G remote controller optional
- The solar controller is built in the shell of lamp for easy installation and maintenance.



MPPT controller



PWM controller



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.

Technical parameters:

Model & power	SZG301SH-30W	SZG301SH-40W	SZG301SH-50W	SZG301SH-60W	SZG301SH-80W
Luminous efficiency for led chip (lm/W)	250	250	240	240	240
Light efficacy for luminaire (lm/W)	200	200	195	195	195
Energy efficiency rating	Class 1	Class 1	Class 1	Class 1	Class 1
Energy saving rate	50%	50%	50%	50%	50%
Luminous flux of luminaire (lm)	6000±5%	8000±5%	9750±5%	11700±5%	15600±5%
Correlated color temperature (K)	3000-6000K	3000-6000K	3000~6000K	3000~6000K	3000~6000K
Color rendering index (Ra)	≥75Ra	≥75Ra	≥75Ra	≥75Ra	≥75Ra
Beam angle (°)	30°/60°/90°/145°*70°	30°/60°/90°/145°*70°	30°/60°/90°/145°*70°	30°/60°/90°/145°*70°	30°/60°/90°/145°*70°
LED lifespan (h)	≥100000	≥100000	≥100000	≥100000	≥100000
Type of battery	LFP battery	LFP battery	LFP battery	LFP battery	LFP battery
Capacity of battery (Wh)	260	350	440	530	710
Lifespan of battery (cycle)	≥3000	≥3000	≥3000	≥3000	≥3000
Charging time (h)	6-7	6-7	6-7	6-7	6-7
Lighting mode	light control+sectional time control	light control+sectional time control	light control+sectional time control	light control+sectional time control	light control+sectional time control
Mono solar panel (W)	40	55	70	90	110
Material of shell	Die-casting aluminum	Die-casting aluminum	Die-casting aluminum	Die-casting aluminum	Die-casting aluminum
Lighting time per day (h/day)	6	6	6	6	6
Continuous rainy day (day)	2-3	2-3	2-3	2-3	2-3
Discharge temperature (°C)	-25°C - +60°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	-10°C - +55°C
IP protection	IP66	IP66	IP66	IP66	IP66
Dimension of lamp (mm)	250*350*160	250*350*160	250*350*160	250*350*160	340*350*160
Mounting mode	U-bracket	U-bracket	U-bracket	U-bracket	U-bracket
Diameter of mounting pipe (mm)	4	4-5	5-6	6-7	7-8

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.