Trismart Lighting

speciality builds higher quality

WWW.SZTRISMART.COM

super brightness

MPPT solar controller

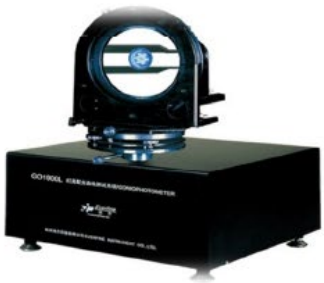
power LFP battery

explosionproof solar panel

two in one structure

Shenzhen Trismart Lighting Technology Co., Ltd.

Shenzhen Trismart Lighting Technology Co., Ltd. is a research and development, design, production and sales of private high-tech enterprises. Company's management and technical team has 20 years' experience in the development and design of industrial lightings, professional lightings and lighting engineering systems. The chairman of the company, Dr. Chen, is the member of China Lighting Society, the Deputy Secretary General of the Shenzhen Lighting Appliance Association and a senior expert of Shenzhen Lighting Society. Trismart Lighting is a cooperative supplier of European Union led street lamps, a network supplier of Royal Shell (shell) and a network supplier of large enterprises such as Sinopec, PetroChina, State Grid, Datang Electric Power and Huadian Group.






4F, Building 9, Dongjin Road, Guangming District, Shenzhen City, P..R.China
Mobile phone: +86-13823331749 / +86-755-29271192
Email: dr.chen@sztrismart.com / Website: www.sztrismart.com

SZG200 series of led explosionproof lamp(solar)

Features:

- Patent explosionproof solar panel.
  Patent No.: ZL 2021 2 0437042.7
- Composite explosion-proof type with flameproof, increased safety and encapsulation type can be used in various dangerous places.
- Explosionproof mark: Ex II 2 G Ex demb IIC T6 Gb
- Adopting Philips ultra-bright led chips, luminous efficacy of luminaire can reach 170-190 lm/W which saves 30% energy compared with similar products.
- Controller and battery and solar panel integrated structure, easy to install
- Lithium iron phosphate battery, cycle life: 3000 cycle.
- Patented composite heat dissipation mode of surface heat radiation+internal air convection, heat dissipation is excellent.

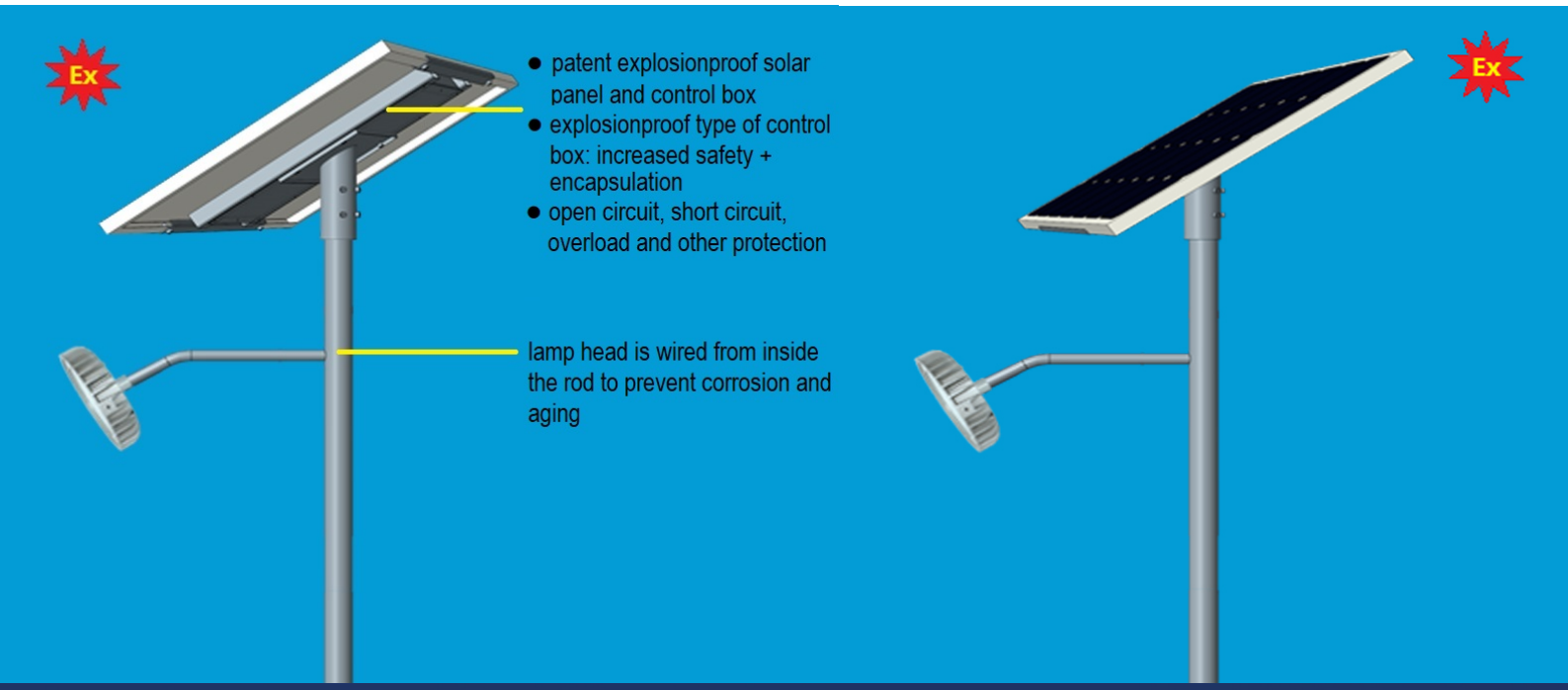
Technical parameters:

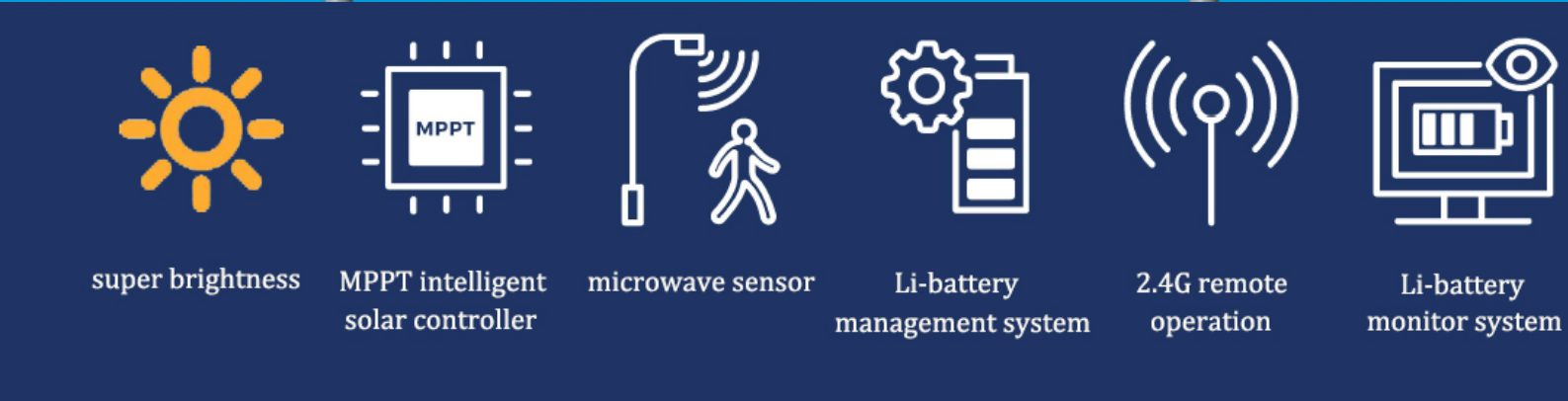
Parameter items	40W	60W	80W
Brand of led chip	Philips	Philips	Philips
Luminous efficiency for led（lm/W）	240 lm/W	230 lm/W	220 lm/W
Total luminous flux（lm）	9600±5% lm	13800±5% lm	17600±5% lm
Light efficacy of luminaire（lm/W）	190 lm/W	180 lm/W	170 lm/W
Beam angle	120°	120°	120°
Correlated color temperature（K）	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	LiFePO4 battery	LiFePO4 battery	LiFePO4 battery
Capacity of battery	350Wh	460Wh	700Wh
Lifespan of battery	≥3000 cycle	≥3000 cycle	≥3000 cycle
Charging time（h）	6-7 hrs	6-7 hrs	6-7 hrs
Continuous rainy days	2-3 days	2-3 days	2-3 days
Power of mono solar panel	60Wp	80Wp	120Wp
Shell material	ADC12	ADC12	ADC12
Discharging temperature	-25～+60℃	-25～+60℃	-25～+60℃
Charging temperature	-10～+55℃	-10～+55℃	-10～+55℃
IP protection	IP66	IP66	IP66
Lamp dimension（mm）	φ240*140	φ240*140	φ240*140
Lamp weight（Kg）	2.2	2.2	2.2
Diameter of mounting pipe	φ60+G3/4	φ60+G3/4	φ60+G3/4

Solar LED explosionproof floodlight

SZG200 solar led explosionproof floodlight(dark sky) is an intelligent explosionproof solar lighting system with easy to purchase, low shipping costs, quick installation and simple maintenance. It adopts composite explosion-proof type with flameproof, increased safety and encapsulation type which can be used in various dangerous places of zone 1 and zone 2. Its explosionproof mark: Ex II2 G Ex demb IIC T6 Gb. The system only consists of two main parts: one is explosionrpoof solar panel part including solar panel and bracket, power lightium iron phosphate battery and intelligent solar controller, the other is explosionproof lamp head part.

It adopts Philips 3030 led chip with more than190 lm/W luminous efficacy of luminaire which can increase the brightness by more than 30%, power lithium phosphate battery with more than 3000 cycle lifespan, MPPT intelligent solar controller with IPT, and polysilicon solar panels with a conversion efficiency of more than 20%.





Trismart Lighting

Philips

3030 super brightness led chip

Super brightness Philips led chip

- led chip luminous efficiency：240 lm/W @40mA
- light efficacy of luminaire：190 lm/W
- The thermal resistance is only 3℃ and 75% lower
- The illuminance is 20%-30% higher
- average service life：≥100,000 hours
- no blue light hazard

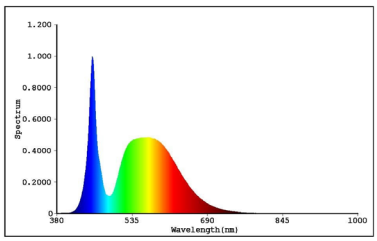
Test report of luminous efficacy of led chip

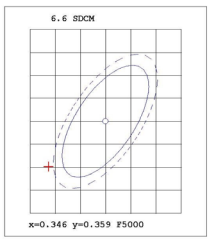
EVERFINE 远方

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
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 = 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

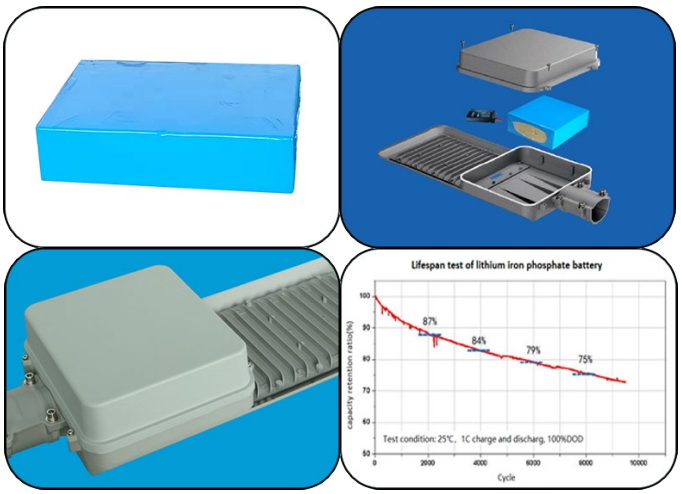
Trismart Lighting

Power

lithium iron phosphate battery

Power lithium iron phosphate battery

- used for electric car, electric bike, solar light, energy storage
- Cycle life：≥3000 cycles
- Service life：≥8 years
- Cell capacity：≥6000mAh
- Less than 3mΩ internal resistance can reduce internal energy loss and offer higher current discharge.
- High temperature discharge efficiency: ≥95%
- Low temperature discharge efficiency: ≥70%
- free of cobalt and other heavy metals
- no fire, no explosion, absolutely safe and reliable
- Controller and battery and solar panel integrated structure, easy to install.



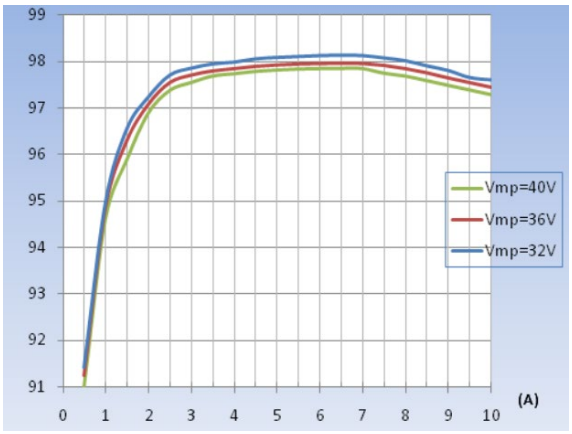
Intelligent solar controller

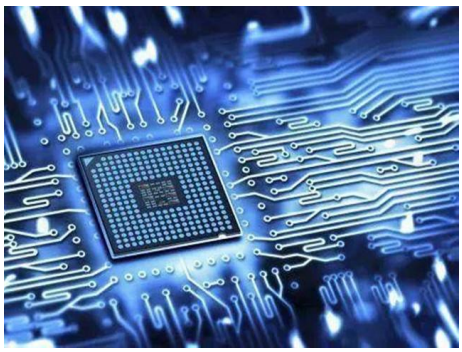
- Adopting MPPT technology to track the maximum power of solar panel
- MPPT efficiency：≥99.9%
- Charge conversion efficiency: ≥98.5%（MPPT）
- Constant current drive efficiency: ≥96%（MPPT）
- IPT(intelligent power technology) can adjust the optimal
- power according to the weather conditions of the next
- 7 days and the remaining energy of the battery pack
- to ensure 365 days' lighting every day.
- Control mode: light control, time control, induction control
- 2.4G remoter optional
- Controller and battery and solar panel integrated structure, easy to install.

Trismart Lighting

MPPT

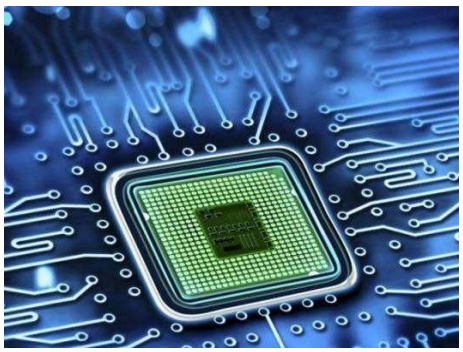
intelligent solar controller





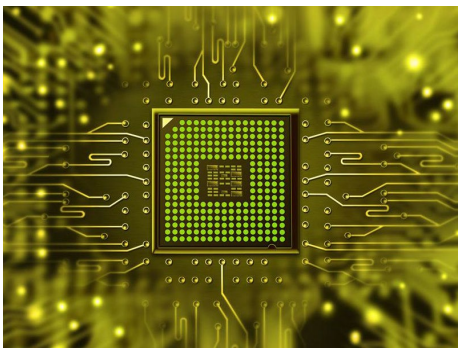
Intelligent power technology

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：

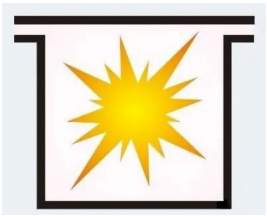
Collecting the output voltage and current of solar panel, the voltage and current of battery and led modular in real time by intelligent chip, the working state of each part is detected and judged, and the fault alarm occurs automatically. Through different indicator lights, it is convenient for maintenance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

Trismart Lighting

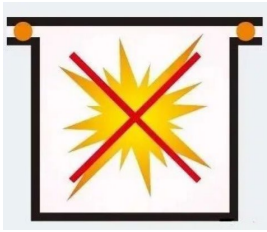
Explosion-proof type and principle

Explosion-proof type and principle

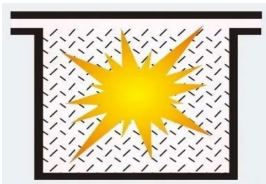
Flameproof enclosure： All components of the equipment that can ignite explosive gas mixture are closed in an enclosure. The enclosure can withstand the internal explosion of the combustible mixtures penetrated into it through any joint surface or structural gap and isn't damaged, and can ensure that the internal flame gas spread through the gap to reduce energy which is not enough to detonate the gas outside the enclosure.



Increased safety： Eelectrical equipments that do not generate arc and spark under normal operation conditions are taken some additional measures to improve its safety and prevent the possibility of dangerous temperature, arc and spark in its internal and external components. Further protective measures are taken in the structure to improve the reliability and safety performance of the equipment.



Encapsulation： The electrical components that produce the sparks, arcs or dangerous temperature which can ignite explosive gas mixtures are encapsulated in the pouring agent so that it cannot ignite the surrounding explosive gas mixture. The pouring measures can prevent the short circuit of electrical components and solidify the electrical insulation and avoid the generation of sparks, arcs, dangerous temperatures, and prevent the invasion of explosive mixture and control surface temperature under normal and fault conditions.



Selection table of Explosive gas atmospheres hazardous location

Suitable hazardous areas	Explosionproof type of lamps	Explosionproof mark
Zone 0	intrinsic safety(ia)	Ex ia
	special type designed for Zone 0(s)	Ex s
Zone 1	intrinsic safety(ib)	Ex ib
	flameproof enclosure	Ex d
	increased safety	Ex e
	pressurized enclosure	Ex px、Ex py
	powder filling	Ex q
	encapsulation	Ex m
Zone 2	type of protection "n"	Ex nA、Ex nC、Ex nR
	pressurized enclosure	Ex pz

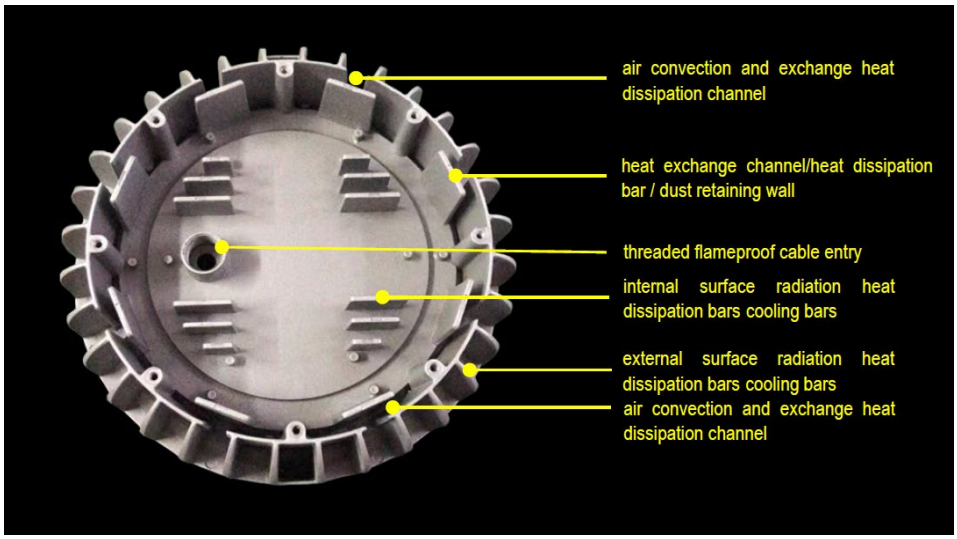
Trismart Lighting

Surface radiation + internal convection heat dissipation

Surface radiation + internal convection heat dissipation:

Radiation heat dissipation: Radiation heat dissipation is a heat dissipation method in which infrared rays are emitted from the surface of the object with higher temperature and received by the object with lower temperature. Radiation heat dissipation is related to the environmental temperature difference and radiation area. The lower the environmental temperature, the larger the radiation area, the more radiation heat dissipation.

Convective heat dissipation: Convective heat dissipation refers to that the air close to the heat source rises in temperature and volume due to radiation. The cold air is then supplemented, and the surface of the heat source exchanges heat with the newly moved cold air, thus continuously taking away heat. The larger and faster the air flow channel is, the faster the convection heat dissipation speed is, and the better the heat dissipation effect is.



Product details:

Trismart Lighting

Applications

Applications:

petrochemical device and other hazardous places

offshore drilling platform and oilfield derrick

oil depot and chemical tank area

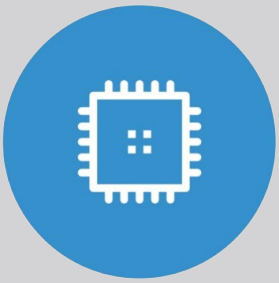
workshop and equipment area of pharmaceutical and chemical enterprises

Trismart Lighting

speciality builds higher quality

energy-saving

quality



intelligent

Address: No.3, behind the substation, Yulu Community, Yutang Street, Guangming District, Shenzhen
Mobile phone: +86-13823331749
Website: www.sztrismart.com
Email: dr.chen@sztrismart.com