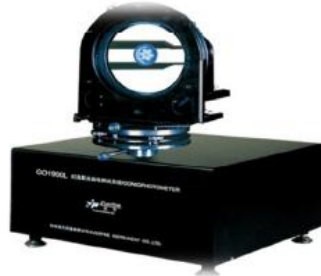




Shenzhen Trismart Lighting Technology Co., Ltd.

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.



WRTLE310 ultra-bright led explosionproof platform lighting(solar)



Features:

- Patent explosionproof solar panel.
Patent No.: ZL 2021 2 0437042.7
- ATEX certification
- Explosionproof mark:  II2 GD Ex d IIB T6 Gb
 II2 GD Ex tb IIIC 85°C Db
- Super brightness 3030 led chips, luminous efficacy for luminaire can reach 200 lm/W which saves 50% energy compared with similar products.
- Power lithium iron phosphate battery, 32700 model, grade A, cycle life: 3000 cycle more than 8 years.
- High efficiency mono solar wafer with solar conversion efficiency: 23%-24%
- Meet the requirement of dark sky
- Lighting mode: light control+sectional timing control

Technical parameters:

Parameter items	30W	40W	60W
Luminous efficiency for led chip (lm/W)	250	250	240
Light efficacy for luminaire (lm/W)	200	200	190
Energy efficiency rating of luminaire	Class 1	Class 1	Class 1
Energy saving rate	50%	50%	45%~50%
Total luminous flux of led chip (lm)	6000±5%	8000±5%	11400±5%
Correlated color temperature (K)	3000-6000	3000-6000	3000-6000
Color rendering index (Ra)	≥75	≥75	≥75
Beam angle (°)	90°-120°	90°-120°	90°-120°
Type of battery	LFP battery	LFP battery	LFP battery
Capacity of battery (Wh)	350	460	700
Lifespan of battery (cycle)	≥3000	≥3000	≥3000
Charging time (h)	6-7	6-7	6-7
Continuous rainy day (days)	2-3	2-3	2-3
Mono solar panel (W)	60	80	120
Material of shell	Die-casting aluminum	Die-casting aluminum	Die-casting aluminum
Discharge temperature (°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
IP protection	IP66	IP66	IP66
Dimension of lamp (mm)	215*158*103	215*158*103	215*158*103
Weight of lamp (kg)	2.2	2.2	2.2
Recommended mounting height (m)	5-6	6-7	7-8

Solar led explosionproof platform lighting

WRTLE310 ultra-bright led explosionproof platform lighting(solar) is an intelligent explosionproof solar lighting system with easy to purchase, low shipping costs, quick installation and simple maintenance. It can be used in various dangerous places of zone 1 and zone 2. Its explosionproof mark:  IIC GD Ex d IIB T6 Gb. The system only consists of two main parts: one is explosionproof solar panel part including solar panel and bracket, power lithium iron phosphate battery and intelligent solar controller, the other is explosionproof lamp head part. It adopts super brightness 3030 led chip with more than 200 lm/W light efficacy for luminaire which can save energy by more than 50%, power lithium phosphate battery with more than 3000 cycle lifespan, MPPT intelligent solar controller with IPT, and mono solar panels with a conversion efficiency of more than 23%.

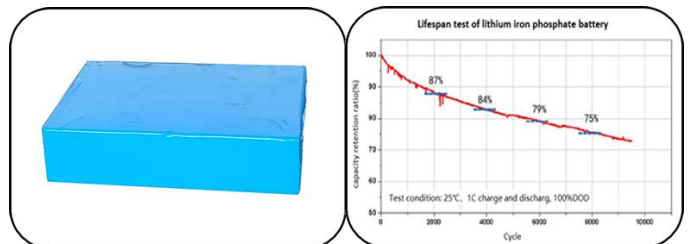
Ultra-bright 3030 led chips

- luminous efficiency for led chip: **250 lm/W**
- light efficacy for luminaire: **200 lm/W**
- Energy efficiency rating: **far beyond class 1**
- Energy saving rate: **50%**
- The thermal resistance is only 3°C and 75% lower
- average lifespan: ≥100,000 hours



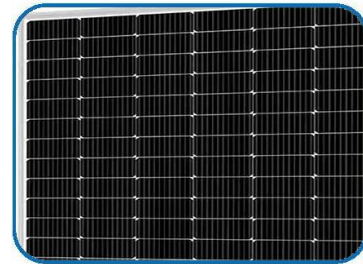
Power lithium iron phosphate battery

- 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
- The battery pack is built in the shell of lamp for easy installation and maintenance.



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%



Intelligent solar controller

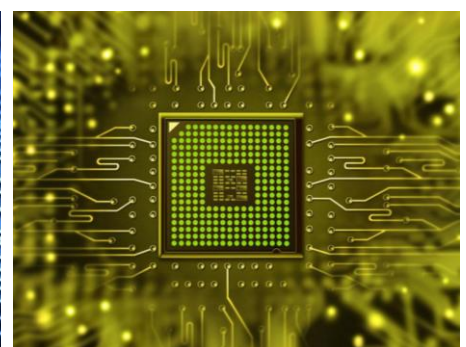
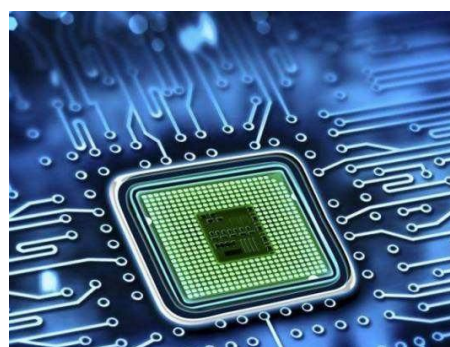
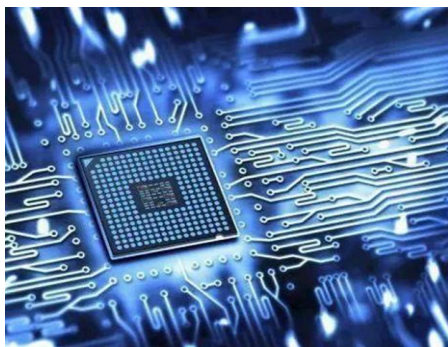
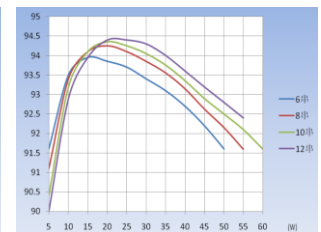
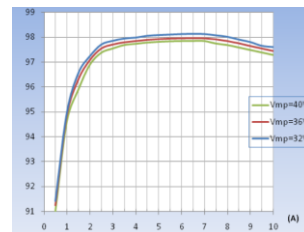
- adopting MPPT technology to track the maximum power of solar panel
- MPPT efficiency: ≥99.9%
- charge conversion efficiency: ≥98.5% (MPPT)
≥94.5% (PWM)
- constant current drive efficiency: ≥96% (MPPT)
≥95% (PWM)
- IPT(intelligent power technology) can adjust the optimal power according to the weather 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:

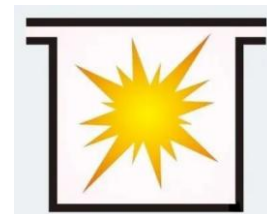
Through monitoring the voltage and current of the single cell in real time and optimizing the calculation, solar controller outputs the optimal charging voltage and current to reach the balanced charging for each cell which will prolong lifespan of battery.

Automatic alarm technology:

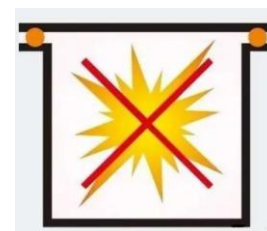
Collecting the output voltage and current of solar panel, the voltage and current of battery and led modular in real time by intelligent chip, the working state of each part is detected and judged, and the fault alarm occurs automatically. Through different indicator lights, it is convenient for maintenance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

Explosion-proof type and principle

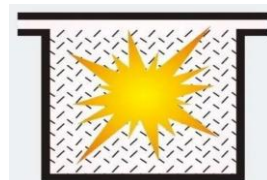
Flameproof enclosure: All components of the equipment that can ignite explosive gas mixture are closed in an enclosure. The enclosure can withstand the internal explosion of the combustible mixtures penetrated into it through any joint surface or structural gap and isn't damaged, and can ensure that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



Increased safety: Electrical 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.



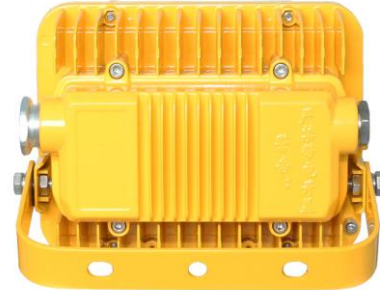
Encapsulation: The electrical components that produce the sparks, arcs or dangerous temperature which can ignite explosive gas mixtures are encapsulated in the pouring agent so that it cannot ignite the surrounding explosive gas mixture. The pouring measures can prevent the short circuit of electrical 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

Product photos:



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