

PATH SERIES LED

Solar Street Light



Path Series LED Solar Street Light

DESCRIPTION

Path Series LED Solar Street Light are ideal solutions for :

- Streets with limited access to power grid
- Streets with limited or no infrastructure
- Places with access to a lot of sunlight

This luminaire delivers maintenance-free, street lighting with great return on investment



FEATURES

Temperature Protection System

Self-designed controller detects temperature in real time-controls the overall temperature of the lamp, adjusts the charging and discharging current to protect the lamp

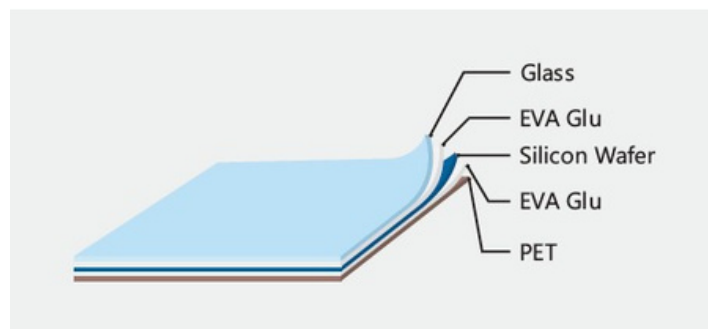
Battery is equipped with safety valve. When the internal pressure is greater than a certain pressure, the safety valve is opened and the electrical connection is disconnected. This ensures that there will be no short circuit.

Battery with positive temperature coefficient protection device, increase resistance and reduce current when overheating to protect the battery

Energy Manager System

Each solar panel is subjected to two times of Electroluminescent tests for semi-finished and finished products before shipment. In order to prevent the crack and black core defects on the solar panel from affecting its output power and lifespan.

MTTP technology (MPPT- Maximum Power Point Tracking) help the system capture the power generated by the solar panel more efficiently and dynamically, which make the conversion efficiency 15%-20% higher than the PWM controller. The surface of the solar panel use etch-treated and anti-reflective coating process to enhance the absorption of light and increase the output power of the cell. The conversion efficiency is $\geq 20\%$.



The solar panel uses high-quality EVA adhesive to be not aged and turning yellow in long-term outdoor working, to ensure high light transmittance and long lifespan.

The solar panel uses 3.2mm ultra-white cloth tempered glass, which perfectly protects the solar panel from wind and snow and hail impact. The light transmittance is $>91\%$, achieving perfect balance in preventing dust adsorption and light transmittance.

Battery Manager System



The motion sensor intelligent mode can remotely set the duration of 5 periods and the ratio of brightness with motion and without motion.



Intelligent lighting management system, adjust the lighting brightness according to the dynamic capacity of the battery, and extend the lighting time.



Morning lighting function can study the dawn time in the previous day to light up before dawn in the next day, which would be convenient for people who wake up early

Excellent Optical Design

Based on 12 years' experience in road lighting, keeping the balances of average illumination, brightness and uniformity to improve the efficiency of light utilization.

Strictly control the light dispersion and reduction caused by secondary optics, reduce the unevenness of blue light and yellow light, and ensure the accuracy and consistency of secondary.

The lens uses outdoor special PC material, light transmittance >93% and better UV resistance.

Using famous brand LED chip, lower light decay, higher brightness, less color temperature drift and blue light hazard.

Solar street light control system

Smart management software is developed based on the BS architecture and can be controlled on any terminal that browses the webpage without installing software.

The map can be visually located, energy-saving statistics, fault alarms, etc. Detects operating states, such as power generation intensity, battery energy, illumination, and fault feedback. Weather intelligent control: According to the local weather forecast for the next 7 days, the core algorithm is well used to intelligently manage the daily lighting duration and brightness.

Holiday lighting mode: 7 days energy storage mode to ensure the lighting effect on the day of holiday.

AI deep learning: Sensors collect sensor big data for statistical analysis. According to the situation of people passing under the lamps each day, the lamps constantly self-optimize and control themselves.

RELIABILITY WARRANTY

Controller

Adopting self-developed controller and remote controller, MPPT control, the core components are all international first-class brand products, such as ST, AO, IR

Passed test of -40°C to 80°C environment, impact and salt spray test in long time lifespan design more than 10 years.

Battery reverse connection protection, LED short circuit/open circuit protection, overheat protection, low temperature charge protection, over charge protection, over discharge protection and other functions.

65°C control + BMS (battery manager system) management, real-time detection of battery status, to make it always work within the appropriate status.

Battery

High-quality cathode, anode materials and electrolytes. Capacity is still ≥80% after 2000 cycles of full charge and full discharge. Theoretical design lifespan of battery is $2000 \times 3 / 365 = 16.4$ years

Fully automatic forming nickle sheet welding process with accurate and reliable welding.

The six sides of the battery pack are fixed by epoxy resin board, which is not easy to cause leakage of electricity due to collision, and it is glued and waterproof to avoid the rust of nickel sheets and solder joints

Battery

No tool open design: No need to use any tools to open the lamp. It is equipped with a car-type pneumatic support rod, which makes it is easy to install and maintain. (Anti-theft screws are optional)

Support high-altitude maintenance: Modular design of all components that is easy to replace.