

SolarTech Power Solutions

Solar light guide control system



Overview

Light control for LED solar lights can be established through several methods: 1) Utilize a timer to automate lighting schedules, 2) Incorporate a motion sensor to activate lights when movement is detected, 3) Implement a remote control for manual operation, and 4) Opt for smart technology that allows smartphone or voice control for convenience. What is a solar street light controller?

The solar street light controller also has boosting voltage function, that is, when the controller cannot detect the output voltage, the solar street light controller controls the output voltage from the output terminal.

How to control solar street light?

You can also control the solar street light to keep 100% brightness for 4 hours after dark. For the rest of the night, set the light keep full brightness when motion is detected, and reduce it to 30% when there is no presence is detected after 30s hold time.

What are the parameters of a solar street light?

There is a table of the main parameters setting. Take Smart-Unit (SU05) and ST43 solar street lights as examples. Generally, the ST43 solar street light is composed of lighting units, a battery, a solar panel, and a charge controller.

How does solar street light work?

A motion sensing circuit is integrated into the solar street light, which allows setting lighting schedules based on user preference at different times during the night. The Smart-Unit can control the light level as well. With Smart-Unit, you can set the brightness of solar street at different times.

How to design a solar street light?

1. Solar Street Lighting Demand Design Formula: $P_{LED} = E \times A / (\eta \times U \times K)$
Example: Road width 6m, distance between lights 25m, target illuminance 20

$I_x \rightarrow P_{LED} = 20 \times (6 \times 25) / (0.85 \times 0.5 \times 0.75) = 20 \times 150 / 0.32 \approx 94W \rightarrow$
Choose a 100W LED module (Luminous flux 15,000 lm) 2. Solar Street Light
Photovoltaic System Capacity Calculation Steps: 3.

What is a solar street light?

The solar street light is a lighting system powered by electricity from batteries, which are charged with the use of solar panels. The solar panel consists of crystalline cells. The charge controller ensures the safety of the system, avoiding overcharging or discharging the battery.

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