SL45 SOLAR STREET LIGHT 10W TO 25W (WITH POLE)

Technical Specifications

PERFORMANCE

Manufactured in an ISO9001:2000 'Quality Assured' facility.

Special control system to prevent over-charging and over-discharging.

Typically dusk to dawn illumination (subject to geographic location, LED Wattage and solar panel Wattage selected).

Up to 3 days autonomy (reserve power) to allow for successive cloudy weather and days without sunshine (subject to the specification of the system selected).

LIGHT FIXTURE

Supplied with a single lampshade unit.

Low profile design with minimal wind resistance.

Features a fully adjustable tenon which can rotate 90 degrees at 15 degree intervals.

The lamp is configured with one LED module containing 14 high output Philips Luxeon® Rebel ES LEDs.

Can be supplied with a Type I, II, III, IV or V lighting distribution pattern.

Choice of LED color temperature (yellow, warm white or white). White is standard.

Yellow is approx. 3800~4100k.

Warm white is approx. 5000~5650k.

White is approx. 5650~6300k.

Lumen tolerance +/- 5%.

The 10 Watt lamp unit provides 1,850 Lumens.

The 15 Watt lamp unit provides 2,775 Lumens.

The 20 Watt lamp unit provides 3,700 Lumens.

The 25 Watt lamp unit provides 4,625 Lumens.

The 30 Watt lamp unit provides 5,550 Lumens.

LED life is typically up to 100,000 hours or equal to about 22 years.

Fixture attaches to the lamp support arm which in turn attaches to the pole.

Anodized aluminum construction with toughened glass.

Black colored anti-static powder coated finish.

Stainless steel hardware.

IP66 weather rating.

LED beam angle is 140 deg. (horizontal) x 65 deg. (vertical).

CRI is >75

Certifications CE, FCC, RoHS, CB, TUV, CCC, CQC. UL listed, cULus, ETL, DLC, cETLus, Designlights Consortium, LM79, LM80.

The light fixture is approx. 17" x 12.5" x 5.5" (43cm x 31cm x 13cm) L x W x D.

The light fixture weighs approx. 11.5 lbs (5.3 kgs).

Tenon internal diameter is approx. 2.4" (6cm).

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BATTERY

24V DC systems use two 12V sealed lead acid, AGM or GEL type rechargeable batteries.

Battery capacity is subject to the specification of the system selected.

Battery capacity options are 18 Ah, 32 Ah, 55 Ah per battery.

Battery dimensions vary subject to battery capacity. Battery weight will vary subject to battery capacity. All sizes shown above will fit inside the battery box.

Typical battery life is approximately 3-5 years subject to environmental factors.

Alternative battery types, capacities and sizes may be available upon request.

Higher capacity batteries may be required for more demanding applications and/or locations with lower insolation.

SOLAR PANEL

Highly efficient polycrystalline solar panel.

Aluminum frame with anti-aging and encapsulated.

Low reflecting tempered glass.

The solar panel is supplied with a support frame and hardware to attach to the top of the pole.

The hardware includes a steel tenon that is approximately 50cm (16”) and will therefore increase the total height of the pole.

Wattage of solar panel is subject to the specification of the system and the solar panel wattage has no effect on the illumination output of the lamp.

Wattage available include 90W, 100W, 180W, and 200W.

Standard stocked panels are 90W and 180W.

90W & 100W solar panel dimensions are approx. 40.25” x 26.25” x 1.5” (112cm x 99cm x 3.5cm) LxWxD.

Solar panels can be supplied in a dual format (2 x 90W = 180W, 2 x 100W = 200W.)

Typical solar panel life is approximately 20-25 years subject to environmental factors.

The geographic location of the street light may affect the size/wattage of the solar panel required.

A higher wattage solar panel may be required for more demanding applications and/or locations with lower insolation.

ARM

Galvanized steel arm to accommodate the lampshade.

Attaches to the street light pole.

Satin black colour finish. Custom colors by special order only.

POST / POLE

Galvanized steel pole which attaches to the top of the battery box cabinet.

Pole has a square flat base (flat plate) with pre-drilled holes for bolting directly to the battery box cabinet.

Fixing bolts are included.

Wind load rating for pole is 140 MPH with a 1.3 gust factor.

Pole height is approx. 13’ (4 metres). Custom height pole by special order only.

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Pole attaches to battery box cabinet and solar panel support frame attaches to top of pole. Total height of pole is approx. 16' (5 metres) when assembled.

Satin black color finish. Custom colors by special order only.

BATTERY BOX

Galvanized steel battery box accommodates the rechargeable batteries and control module.

Pre-drilled holes in the battery box cabinet base enable secure installation.

The pole attaches to the top of the battery box.

Satin black color finish. Custom colors by special order only.

Battery box is approx. 14" x 14" x 17" (35cm x 35cm x 43cm) LxWxH.

Two templates for setting the fixing bolts into new, wet concrete are included.

The templates for aligning the anchors are approx. 17 3/4" x 17 3/4" (45cm x 45cm).

The bolt pattern (diagonal distance from one hole center to another) is approx. 22 3/16" (56cm).

The 4 pre-drilled holes on each template are approx. 5/8" (1.5cm) diameter.

CONTROL MODULE

Supplied with a MPPT charge controller which automatically controls the solar panel power, battery charging and lighting function and operation.

Ultra fast Maximum Power Point Tracking (MPPT).

The MPPT charge controller is typically 30% more efficient than standard PWM controllers and 10% more efficient to most other MPPT controllers.

Additional efficiency for cloudy weather and during times of reduced sun radiation.

This controller features the very latest smart technology.

Provides extended battery life and extra protection against excessive battery discharge and overcharge.

Battery life algorithm operates 24/7.

Low voltage detection for automatic disconnect.

Continuous environment, input and output power management.

The controller is sized to the system specifications with 10A and 15A versions available (subject to solar panel wattage and battery capacity).

Pre-programmed software for load output, dusk to dawn lighting, single timed lighting, dual timed lighting, dimming option and the ability of interfacing with motion detection, where required.

This MPPT charge controller is programmed by Solar Illuminations as per your requirements and system ability.

Lighting control features illumination from dusk to dawn (where applicable), or on at dusk for X amount of hours then off, or on at dusk for X amount of hours, then off, then back on again for X amount of hours before dawn.

Dimming option (where applicable) allows the lighting to dim at any time during the illumination time.

The dimming option or any other illumination mode can be used in conjunction with motion activation (where applicable).

Dimming may be at any percentage from 1-99%.

Supports real time data monitoring (iPhone, Andriod, Mac or PC) with optional interface and/or Bluetooth dongle.

Battery voltage 12/24v dc auto select.

Rated charge current 10A/15A.

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Maximum PV power (12v dc) is 135W at 10A and 200W at 15A.
Maximum PV power (24v dc) is 270W at 10A and 400W at 15A.
Maximum PV open circuit is 75v dc.
Peak efficiency is 98%.
Charge voltage (absorption) is 14.4v dc.
Charge voltage (float) is 18.8v dc.
Multi stage adaptive charge algorithm.
Automatic temperature compensation.
Low voltage load disconnect at 11.1v dc to 11.8v dc (12v dc system) or 22.2v dc to 23.6v dc (24v dc system) or battery life algorithm.
Low voltage load reconnect at 13.1v dc to 14v dc (12v dc system) or 26.2v dc to 28v dc (24v dc system).
Protection feature includes battery reverse polarity (fuse), output short circuit and over temperature.
Operating temperature is -22 deg. F (-30 deg. C) to 140 deg. F (+60 deg. C).
Humidity up to 95%, non condensing.
Power terminals are AWG 10 (6mm2).
Protection rating IP22 (connection terminal area).
Weight is 500g (1.1 Lbs).
Dimensions are approx. 4" x 4" x 1.5" (10cm x 11cm x 4cm).
Please note: Upon installation and power-up the controller goes into a 7 day evaluation mode where smart monitoring and configurations commence. Additional evaluation with self-managing adjustments may continue for up to 7 more days. This is all part of the smart feature that enables this intelligent controller to understand its use, the application, the surrounding environment and the current conditions. During this time some of its programmed features may differ temporarily. This is a perfectly normal process and must be accepted during that time. During this time the controller will adjust to the current condition and charge status of the batteries. It is therefore recommended that all batteries are 100% fully charged before connection using an appropriate battery charger. This may significantly reduce the evaluation mode time of 7+7 days to much less. The solar panel(s) should be connected to the MPPT charge controller first, followed by the fully charged batteries.

INTERCONNECTING CABLING

Connection wiring between the battery box, solar panel and lamp unit is included.

INSTALLATION

Installation guide included.
Upon curbside delivery, installation is entirely at the risk of the customer and/or the customer's appointed installer.

REMARKS

Subject to warranty registration, a limited 20 year solar panel warranty applies and a limited 5 year warranty on all other components (excluding batteries). Battery warranty (if applicable) is with the battery manufacturer.* Warranty registration is required (after purchase), otherwise a standard 30 day limited warranty will apply. After making your purchase, go to www.solarilluminations.com/registration to register your warranty.
Additionally, unlimited, lifetime technical support is available for all warranty registrations.

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Please Note: This product is a special order and is non-returnable except in the event of a fault (during its warranty period) when the product, once returned will be repaired or replaced.

The solar panel must be installed in a location where it can receive full direct sunshine (when available) and usually set facing South at an appropriate angle (where adjustment options allow). The solar panel must not be installed in a shaded or part shaded location and never indoors. The standard specifications of the system (particularly the solar panel Wattage and battery capacity) may need to be adjusted. These components are determined by your geographic location, power consumption (LED Wattage) and the total amount of hours of illumination time required. Such changes to the standard specifications may increase or decrease the cost shown. Please contact us for more information or assistance. The illumination time is estimated and subject to various factors including (but not limited to) geographic location, seasons, temperature, weather conditions & location of product etc. The illumination time of most solar lights can reduce during winter months when the weather is poor and the days are shorter. During this time insolation hours decrease accordingly. Shorter illumination time due to one or more of the above factors does not define the product as being 'defective' or 'not as described'. All solar lights must be used in a completely dark location at night time otherwise they may not illuminate. Nearby strong lighting sources or ambient lighting may affect the operation of a solar light. This does not define the product as being 'defective' or 'not as described'. Please note, if you do not install or use this product for several months the battery may discharge naturally on its own. By allowing a battery to deep discharge it may cause irreversible damage as the battery may then lose the ability to recharge or hold a full charge. Although unlikely, we reserve the right to supply this product with any minor alterations or minor changes to the specifications (shown above by text description or by photographs) due to different supplies or product batches received, incorporating such product changes made by the manufacturer, without further notice. Descriptions, specifications and photographs are updated regularly but may not be current when minor changes to a product have only recently been made.

The product specifications above should be used as a general guide. We can offer modifications and changes to the specifications of this product if necessary. This may be required to meet your specific needs and/or due to the geographic location of the installation site. In locations where insolation levels are poor or lower than normal, a higher wattage solar panel and larger capacity batteries may be required. We offer product customization. MPPT, dual timer and dimming charge controllers are all available as optional extras. One or more motion sensors can also be added as an optional extra. Other options included UL listed or ETL certified components and the provision of Buy American Act (BAA & ARRA) compliance, if required. Photometric data, 3D renderings and planning of your lighting project is available. Please contact our sales department for more information before making your purchase.

* View our Terms, Conditions and Polices (including our Returns Policy) for further information.

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