SL01
Solar ‘High-Lux’ Street Light / Parking Lot Light

TECHNICAL SPECIFICATIONS


GENERAL

- Operating voltage is 24 v. DC.
- Operating temperature -40 deg. F to +125 deg. F.
- Special control system to prevent over-charging and over-discharging.
- Power consumption of the 552 SMD/LED system is 24v / 1.6A / 38W
- Power consumption of the 720 SMD/LED system is 24 v / 2.1A / 50W
- Generally, approximately 5 hours of strong direct sunshine will enable a full charge.
- Illumination time is up to 12 hours or more, generally dusk to dawn.
- Up to 5 days reserve power to allow for successive cloudy weather and days without sunshine.
- Several successive cloudy or alternating overcast days typically should not affect illumination time.

LAMP UNIT (LIGHT HEAD)

- Fitted with 552 Cree® SMD/LED’s or 720 Cree® SMD/LED’s (subject to desired specifications).
- All SMD/LED’s are white at approx 6000k color temperature. Amber or white/amber or other LED color temperatures possible, via special order only and at extra cost.
- Each LED has a light output of greater than 8000 mcd and approx. 6 Lux (Lumens per square metre).
- Each LED is rated at 3v dc and 15mA.
- Each SMD has a light output of 8 Lumens and a wider light spread.
- 552 SMD/LED lamp provides approx. 4500 Lux (Lumens per square metre) or approx. 358 Candela.
- 720 SMD/LED lamp provides approx. 6000 Lux (Lumens per square metre) or approx. 517 Candela.
- Using a 20’ (6 metre) pole, average light pattern will provide approximately 40 Lux (Lumens per square metre) or 3.7 fc/ftc.
- Using a 26’ (8 metre) pole, average light pattern will provide approximately 30 Lux (Lumens per square metre) or 2.7 fc/ftc.
- Using a 33’ (10 metre) pole, average light pattern will provide approximately 20 Lux (Lumens per square metre) or 1.7 fc/ftc.
- 552 SMD/LED lamp is recommended for a 20’ (6 metre) pole but can also be used on a 26’ (8 metre) or 33’ (10 metre) pole, if desired, although illumination will decrease somewhat due to the lamp height.
- 720 SMD/LED lamp is recommended for a 26’ (8 metre) pole or 33’ (10 metre) pole but can also be used on a 20’ (6 metre) pole, if desired, for a greater illumination.
- Other SMD/LED quantities within the lamp are available by special order.
- Polarity protected circuitry.
- SMD/LED life is typically up to 100,000 hours or equal to about 22 years. No bulb changes unlike incandescent street lights.
- Removable LED circuit board with easy plug-in connections.
- Fixture attaches to the arm which in turn attaches to the post or pole.
- Silver/gray & white color finish. Custom colors by special order only.
- The lamp head is cobra style and is approximately 32” x 14” (at widest) x 8” (at highest) L x W x D.
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**CHARGE CONTROLLER/TIMER (PROGRAMMABLE CONTROL MODULE)**

- This system includes a programmable control module which regulates and manages the solar panel power, battery power, and illumination timer.
- The compact control module has LED indicators to display status as well as input connections for solar panel, batteries, and output connections for the lamp.
- Push button programming.
- Accepts and controls GEL, AGM, and sealed lead acid type (VRLA) batteries.
- Low voltage disconnect regulated by state of charge or voltage.
- Detects daytime and night time conditions via the solar panel.
- Automatic adaption to ambient temperature conditions.
- Safety features for short circuit and reverse polarity protection of battery and lamp inputs.
- Automatic voltage recognition (12v or 24v).
- Float voltage for 12v system is 13.7v dc and for 24v system is 27.4v dc.
- Low voltage disconnect for 12v system is 11.4 – 11.9v dc or for 24v system is 22.8 – 23.8v dc.
- Reconnect voltage for 12v system is 12.8v dc or for 24v system is 25.6v dc.
- Dimensions approx. 11 cm x 10 cm x 4 cm (4” x 4” x 1.5”) LxWxD.
- Ambient temperature range -40 deg C – +50 deg C (-40 deg F – +122 deg F).
- Protection rating I.P.22
- Programmable lock-out feature for optional use to prevent accidental or unauthorised tampering.
- User programmable illumination time of up to 1 to 12 hours or dusk-to-dawn setting (where conditions permit).
- Default setting is typically dusk to dawn.
- User or installer can set the control module to run from dusk and then shut off after a certain amount of hours.
- For example from dusk for 4 hours then switch off, or run from dusk for 6 hours then switch off.

**SOLAR PANEL**

- Highly efficient polycrystalline solar panel.
- Aluminum frame with anti-aging and encapsulated.
- Low reflecting tempered glass.
- 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 from 140w to 180w and up to 290w by special order.
- Standard stocked panels are 140w and 180w.
- If a solar panel choice is offered select a higher wattage panel for northern geographic locations or where optimum performance is essential.
- The 140w solar panel is rated at 34v / 4.2A. The 180w solar panel is rated at 34v / 5.3A.
- Solar panels are typically supplied in a dual format (2 x 70w = 140w or 2 x 90w = 180w).
- 70w solar panel dimensions are approx. 26.5” x 36.5” x 2” (LxWxD).
- 140w solar panel dimensions are approx. 45” x 40” x 2” (LxWxD).
- Typical solar panel life is approximately 20-25 years subject to environmental factors.
- The geographic location of the street light will affect the size/wattage of the solar panel required.
- The amount of SMD/LED’s within the lamp head will affect the size/wattage of the solar panel required.
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ARM
- Galvanized steel arm to accommodate the lamp unit (light head).
- Attaches to the street light pole.
- Can be ordered to attach to an existing post, pole or for wall or building mount.
- Silver/gray color finish. Custom colors by special order only.

POST / POLE
- Standard grade galvanized steel pole with base unit to enable secure installation.
- Pole has a square flat base (flat plate) with pre-drilled holes for installation.
- The square base of the pole is approximately 12.5” x 12.5” (320mm x 320mm).
- Fixing bolts are included.
- Wind load rating for pole is 110 MPH with a 1.3 gust factor.
- Two templates for setting the fixing bolts into new, wet concrete are included.
- The templates for aligning the anchors are approx. 12.5” x 12.5” (320mm x 320mm).
- The bolt pattern (diagonal distance from one hole center to another) is approx. 12.75” (323mm).
- The 4 pre-drilled holes on each template are approx. 3/4” (20mm) diameter.
- Pole height available in several choices, approximately 20’, 26’, 33’ etc. (6m, 8m, 10m etc.)
- Custom height pole by special order only.
- The top of the pole has an outside diameter of approximately 3” (76mm) and tapers outwards towards the base.
- Silver/gray color finish. Custom colors by special order only.
- The pole diameter will vary depending upon the height. A 20’ pole has a diameter of approx. 6” at its base decreasing down to approx. 3” at the top.
- Typically the pole requires a concrete foundation of approximately 1 cubic yard (3’ x 3’ x 3’).
- The location, wind factor and ground condition will affect the size of the foundation required.

BATTERY CAPACITY
- 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.
- Battery capacity is from 100 Amp/Hr to 120 Amp/Hr. each battery.
- 552 SMD/LED lamp with 140w solar panel is supplied with two 12v 100 Amp/Hr batteries.
- 552 SMD/LED lamp with 180w solar panel is supplied with two 12v 100 Amp/Hr batteries.
- 720 SMD/LED lamp with 180w solar panel is supplied with two 12v 120 Amp/Hr batteries.
- Battery dimensions vary subject to battery capacity. Battery weight will vary subject to battery capacity.
- Typical battery life is approximately 3-5 years subject to environmental factors.
- 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. Periodic charging is always recommended when a product is not being used or when the solar panel is disconnected.

BATTERY BOX
- Galvanized steel battery box will accommodate the rechargeable battery.
- Welded anchor plates or pre-drilled holes to enable secure installation.
- Silver/gray color finish. Custom colors by special order only.
- Battery box will vary depending upon the specifications of the system and batteries supplied. Typically it is approx. 21” x 15” x 8” (L x W x D).
- Connection wiring between the battery box, solar panel and lamp unit is included. Connection wiring between the battery box, solar panel and lamp unit is include.