All-in-one Solar Light
SPECIFICATIONS
SMLN-70W
Integrated all-in-one Street, road and area lighting

Benefits

SUNMASTER
Designer solar light with added value

Application
The SUNMASTER designer solar light is a solar-powered LED lighting solution that can be used at any location where there is no mains power supply. Thanks to its timeless, prizewinning design, the SUNMASTER is excellent for lighting modern urban space as well as protected monumental structures. The ingenious operating system guarantees flawless function for several nights even during the worst weather. According to EN13201 the SUNMASTER is superlative for the illumination classes S5 and S6; that is to say, for side streets with minimal traffic, squares, parking places etc.

Benefits

Lower Operation Cost: It is less expensive to operate a solar powered street light than a traditional street light.

Compact Design: Our design and technology implementation have been driven by our desire to eliminate the need for bulky external battery boxes and external solar panels and achieve All in One Solar Powered Street Light.

Reduced Damage/Theft: By locating directly on the light fixture and placing the battery within, the risk of damage, theft or tampering is greatly reduced. There are no wires in the street pole, which means that the wire itself (which exists in regular street lights) can’t be stolen and sold for scrap.

Ruggedized Technology: Require less maintenance and reduced parts replacement due to initially incorporating higher quality components.

Insect Swarms: The solar powered street light uses LED lighting which does not produce Infrared light, and therefore will not attract insects.

Improved Safety: The solar powered street light does not require connection to an electrical grid. It is safer and easier to install. In the event of a power outage, the light remains on. This reduces the chance of accidents and the constant light deters theft/vandalism.

Anywhere/anytime: The solar powered street light can be used in any location. Since no electrical grid is required, it can be installed on buildings, in parking lots, in remote locations simply by hanging it on a pole.

Faster Installation: Since you don’t need to trench power lines to the pole, run wires up the pole, connect wires to an electrical grid, or hard wire the street light, the installation is significantly faster. In fact, it is so easy, it can be installed on the pole before it’s erected, and thereby reducing a step completely from the process.

An added-value package combines a guarantee extended to 6 years with replacement battery and special anti-theft screw set.
Integrated all-in-one Street, road and area lighting

**Technical data**

### Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charging Time</td>
<td>6-8 hours by sun</td>
</tr>
<tr>
<td>Discharging Time</td>
<td>10-12 hours/day</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-20°C ~ 70°C</td>
</tr>
<tr>
<td>Mounting Height</td>
<td>5-8m (suggested)</td>
</tr>
<tr>
<td>Space between light</td>
<td>15-25m (suggested)</td>
</tr>
<tr>
<td>Housing material</td>
<td>Aluminum alloy</td>
</tr>
</tbody>
</table>

### Photovoltaics

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
<td>100W Monocrystalline silicon cells</td>
</tr>
<tr>
<td>Open circuit voltage Voc</td>
<td>22.5V</td>
</tr>
<tr>
<td>max. voltage Umpp</td>
<td>18V</td>
</tr>
<tr>
<td>Short circuit current Isc</td>
<td>5.86A</td>
</tr>
<tr>
<td>max. current Imp</td>
<td>5.55A</td>
</tr>
<tr>
<td>max. power Pmax</td>
<td>100W</td>
</tr>
<tr>
<td>Tolerance Pmpp</td>
<td>0 to 3%</td>
</tr>
<tr>
<td>Level of effectiveness of solar cells</td>
<td>&gt;19%</td>
</tr>
</tbody>
</table>

### Illuminant

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED max. output</td>
<td>70W</td>
</tr>
<tr>
<td>LED max. light flux</td>
<td>11900lm</td>
</tr>
<tr>
<td>Colour temperature</td>
<td>5.600k to 6.500k</td>
</tr>
<tr>
<td>Autonomous time with full battery max.</td>
<td>36h (operated by PIR sensor)</td>
</tr>
<tr>
<td>LED life</td>
<td>&gt;50,000h</td>
</tr>
<tr>
<td>State-of-the-art LED</td>
<td>Insect-neutral light</td>
</tr>
</tbody>
</table>

Lamp Size Chart

![Lamp Size Chart Image]

**SMLN-70W**
 **Al-in-one Solar Street light**
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**Battery**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Lithium battery (LiFePO4) 48Ah/12.8v</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>12V</td>
</tr>
<tr>
<td>Battery life</td>
<td>approx. 5-7 year</td>
</tr>
<tr>
<td>Operating temp</td>
<td>-20°C ~ +70°C</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Battery also charged by panel on cloudy days</td>
</tr>
</tbody>
</table>

**Guarantee:** 3 years
Integrated all-in-one Street, road and area lighting

Technical data

SUNMASTER

Monocrystalline Solar Panel

Waterproof controller

6063 aluminum radiator

PIR

5050 LEDs Street Light Module

Stainless steel screw

Arc-shaped hoop

Lithium battery Pack

Switch

Support bracket

Pole

**LIGHTING THE WAY**

Built specifically to illuminate a wide range of applications, it is the world’s most versatile and compact LED solar lighting system. Its clever design and slim line construction incorporates the latest solar power and LED technology, providing many years of consistent performance and operational reliability.

**BUILT TO LAST**

Has been designed to withstand the harshest and most extreme environments it has to offer. From blistering heat to driving rain, hail and sub-zero temperatures. Whatever the environment is, SunMaster rugged construction is up for the challenge. Its internal components offer IP65 weather protection and its external components are built with marine grade aluminium and stainless steel fixings.

**UNIQUE PROPERTIES**

- ‘All-In-One’ solar module = Easy installation
- Plug & Play wiring = Fast installation
- Lithium battery technology offers up to 4 times more discharge capacity over Lead Acid types and 3 times more cycle life
- Tamper and Theft proof design
- Automated LED output options for greater battery autonomy
- Customer replacement components

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SMLN-70W
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All in one series has a built-in motion detection security feature that automatically regulates the LED light output from full brightness to a lower level depending upon the detection of movement around the light. This fluctuation of lighting intensity preserves battery power and also serves to increase community security by deterring unsociable activity late at night and early in the morning where these lights are installed.

PIR Detection Area

Cross Section (range 5m)

Vertical

Horizontal

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Installation

Make the solar panel face south while installing. Meanwhile, you can adjust the angle between lamp head and level (as follow), you’d better reconcile the lamp head with local latitude.

![Can adjust the angle (0° - 50°)](image)

**Installation Notes**
- Install fuse if present before use.
- Tool supplied to tighten security bolts provided.
- Face solar panel an much towards the north as possible to maximize sun exposure.

To place the light pole into the best spot with good day lighting. The light pole should be the length 4.6m, the thickness 2.0mm with material iron or steel, the diameter 50-90mm. Unfold the knob of fuse (see below) and take out the insulating film if the fuse sockets, to check up if the fuse working right or not, and then tighten.

Place the lamp on the pole by its sleeve, special screw should be used and steady installation should be ensured.

![The second installation method, as followed:](image)

**Installation Notes (instructions are supplied with each fitting)**
- Install fuse if present before use (remove any film under fuse)
- Tool supplied to tighten security bolts provided
- Face solar panel as much towards the north as possible to maximise sun exposure (and therefore battery charge)

**NB:** As with all solar products, performance is wholly dependent upon the hours of direct sunlight and the orientation of the solar panel.