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# LightSaver Max Operating Instructions

## Technology

The LightSaver Max is made with amorphous silicon solar material, which is incredibly thin, flexible, lightweight, and durable. Our thin film solar technology is also extremely sensitive to light. This means it works better in cloudy or shaded environments than traditional solar panels, turning on earlier and staying on later each day.

## Operation

The LightSaver Max collects energy from the sun when available, storing it in the internal battery. That energy is then available to charge a USB or 12V device anytime, eliminating the need to leave your device out in the sun. The LightSaver Max can also be charged using USB or 12V inputs if the solar panel is fully rolled up. A second LightSaver Max or another PowerFilm Solar panel (30W maximum) can be connected to the 12V input to increase solar charging speed.

**Single button press** - Turns the outputs on, allowing the LightSaver Max to charge devices. Outputs will stay enabled until the system is shut off, or about 90 minutes have passed with no load on the outputs. If the LightSaver Max is fully discharged, it will disable the outputs. This protects against draining a device's battery by turning it on and off, which is common in many other solar chargers.

**Double button press** - Changes the state of the flashlight. With the flashlight turned off, the first double press will turn the flashlight on to the high setting, the second double press will change the flashlight to the low setting, and the third double press will shut it off.

**Press and hold** - Turns off the LightSaver Max. After a press and hold, all LEDs on the outputs will be shut off, indicating the unit has been turned off.

## Caring For Your LightSaver Max

### Avoid Physical Damage

The LightSaver Max's solar material is thin, light, and durable, but creasing or puncturing the solar panel will reduce efficiency. Reasonable care in handling will ensure a long life.

### Charging Temperatures

Avoid leaving the LightSaver Max on the dashboard of a hot car or in other similarly hot environments as the heat may damage the battery.

The LightSaver charges most effectively between 35 to 115 degrees Fahrenheit (2 to 45 degrees Celsius).

When charging the LightSaver Max from solar, roll the tube under the solar panel to prevent potential overheating of the batteries.

### Avoid Excessive Water

A little water on the LightSaver Max is not a problem, but allowing significant water inside the unit may corrode components. Saltwater is particularly corrosive and should be kept out of the device.

## Specifications

**Battery:** 18,000mAh (60Wh) (Lithium-ion)

**Weight:** 1.5 lbs / 0.7 kg

**Power In:** USB-C (3A), 12V (2A)

**Power Out:** Dual USB-A (2.5A), 12V (5A peak)

**Solar Charge:** 6-8 hrs of full sun

**Wall Charge:** 3-4 hrs (12V) 6-7 hrs (USB-C) 8-10 hrs (USB)

**Size Rolled:** 13.5 x 2.5 in / 342.9 x 63.5 mm

**Size Unrolled:** 13.5 x 34.5 in / 876.3 x 342.9 mm

## Battery Care

Charge the LightSaver Max at least once every three months for the best battery performance. If the LightSaver Max's battery is completely drained, it may need to charge for a few minutes before the indicator light illuminates. Always store the LightSaver Max in a cool environment with a battery charged over 50 percent.

## Mounting

The LightSaver Max features four attachment points allowing it to be mounted securely on a backpack, tent, etc. Keep in mind the expected direction of the sun when choosing where to mount the LightSaver Max. The easiest and most effective approach is usually to mount horizontally (Example: mounting on the top of a backpack rather than the back). The LightSaver Max's solar panel is far more tolerant to shading than most solar devices, but any shade will reduce the amount of charge collected. If mounting the LightSaver Max on the top of a tent, choose a location that will face the sun for the longest portion of the day.

## Maximizing Use Of The Sun

Facing the unrolled LightSaver Max directly toward the sun results in the maximum amount of energy collection. A day's worth of exposure, 6-8 hours, on a mostly sunny day while laying horizontally should result in a full charge.

*\* Clouds and haze reduce the amount of sunlight that reaches the LightSaver Max.*

## Charge Indicator

The LightSaver Max's charge indicator turns on when there is electrical current flowing from either the solar panel, 12V input, or the USB-C input to the battery and turns off at all other times to conserve battery.

## Battery Status

**Red:** 0-15%

**Yellow:** 15-80%

**Green:** 80-100%



## Certifications

CE (Directives 2014/30/EU and 2014/35/EU)

MIL-STD-810G

RoHS

Berry Amendment Compliance

For FAQs, warranty information, full compliance statements, and other resources visit: [www.powerfilmsa.co.za](http://www.powerfilmsa.co.za)

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