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# LightSaver Operating Instructions

## Technology

The LightSaver 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 collects energy from the sun when available, storing it in the internal battery. That energy is then available to charge a USB device anytime, eliminating the need to leave your device out in the sun. The LightSaver can also be charged from the wall or other USB sources using its micro USB input.

When a device is plugged in, the LightSaver will charge the device until fully charged, or the LightSaver is fully discharged. The LightSaver turns on automatically with no button push required. If the LightSaver is fully discharged, the output will remain on until its battery has been charged to at least 10%. This protects against draining a device's battery by turning it on and off, which is common in many other solar chargers.

The LightSaver is not designed to charge a device from the solar panel directly. Instead, the solar panel charges the internal battery which, once charged, is available to provide power to other devices.

## Caring For Your LightSaver

### Avoid Physical Damage

The LightSaver'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 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).

### Avoid Excessive Water

A little water on the LightSaver 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.

### Battery Care

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

## Mounting

The LightSaver 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. 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's solar panel is far more tolerant to shading than most solar devices, but any shade will reduce the amount of energy collected. If mounting the LightSaver 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

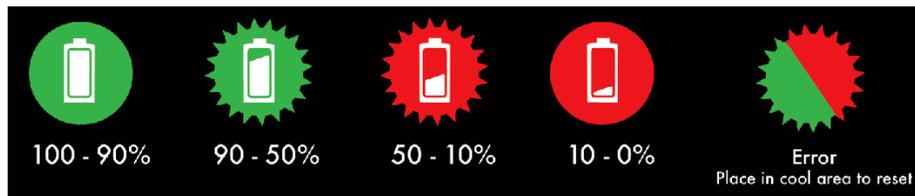
Facing the unrolled LightSaver directly toward the sun results in the maximum amount of energy collection. A day's worth of exposure, 6-8 hours, on a mostly sunny day while laying horizontally should result in a full charge.

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

## Charge Indicator

The LightSaver's charge indicator turns on when there is electrical current flowing from either the solarpanel or the micro USB input to the battery and turns off at all other times to conserve battery.

## Battery Status



## Specifications

**Battery:** 3,200mAh (Lithium-ion)

**Weight:** 4.9 oz / 138.9 g

**Power In:** Solar + USB (1A)

**Power Out:** 1 USB (5V, 1A Max current, Typical current 0.25A-0.75A depending on device)

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

**Wall Charge:** 3 hrs

**Size Rolled:** 7.8 x 1.5 in / 198.1 x 38.1 mm

**Size Unrolled:** 7.8 x 18.5 in / 198.1 x 469.9 mm

## 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.powerfilmsolar.com](http://www.powerfilmsolar.com)

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