

## Instructions

**CAUTION: Please read the following instructions before operating your eSUN™ Folding Solar Power Panel**

eSUN™ solar panels convert sunlight directly into 12 V electricity—ideal for recharging consumer electronics and maintaining vehicle batteries.

The eSUN™ 25W is an unregulated solar panel intended for battery charging. Open circuit voltage (unconnected) can be as high as 25 volts. Always consult manufacturer's specification before use. Contact your eSUN™ dealer for more information.

### PRODUCT DESCRIPTION AND SPECIFICATIONS



#### SPECIFICATIONS:

Max Power:	25 W
Nominal System Voltage:	12 V
Rated Current:	1.5Amps MAX
Weight:	1.7 lbs
Open Size:	41 1/4 x 21 1/2 in 102 x 55(cm)
Folded Size:	11 x 8 1/4 in 28 x 21(cm)

#### Product Application Chart – 25W

Application	Run Time – R Charge Time – C
Bilge pump (36W)	R 3 - 4 hrs.
Cellular Phone (6W)	R All Day.
GPS (5W)	R All Day
CB Radio (5W)	R All Day.
AM / FM Radio (5W)	R All Day
Satellite Phone (5W)	R All Day
Portable Powerpack (150W)	C 7 hrs.
Portable Powerpack (300W)	C 11 hrs.
Portable Powerpack (600W)	C 15 hrs.
Portable Powerpack (1500)	C 32 hrs.

*NOTE: Charge times are estimates only, and depend on several factors including device, weather and season.*

The overall performance of the Folding Solar Power Panel is dependent on a variety of conditions including season, orientation with direct sunlight, cloudy conditions, temperature, and shadowing. As a result, 'typical' performance parameters are dependent on the placement of the Folding Solar Power Panel.

#### PART LIST (see Fig. 1):

- eSUN™ Folding Solar Power Panel (not shown)
- 12 V vehicle power plug
- 12 V vehicle power receptacle
- Battery clamps
- 4 in. barrel connector
- 8 ft. extension cable



Fig. 1

#### IMPORTANT SYSTEM CARE INSTRUCTIONS:

- Although the Folding Solar Power Panel is flexible, **ONLY FOLD** the natural creases in the all-cloth portions of the panel.
- DO NOT FOLD** with the solar cells facing outward.
- DO NOT FOLD** or crease the solar charger on sharp edges or objects.
- DO NOT CRUMPLE OR IMPROPERLY BEND PANELS.**
- DO NOT** excessively flex or bend the panel as this could cause the plastic layers to crease or bubble.
- DO NOT** machine wash, machine dry, or dry clean the panel.
- ALWAYS** charge vehicle lead-acid batteries in a well-ventilated area.
- DO NOT** attempt to charge non-rechargeable batteries.
- ALWAYS** ensure correct polarity of the connections before attaching. **DO NOT** connect vehicle power plug cable to vehicle power outlet cable.
- Use extension cord provided to attach any of the cable accessories together.
- The Folding Solar Power Panel is designed for portable outdoor use. Fold and store when not in use.



#### FOLDING SOLAR POWER PANEL APPLICATIONS/HOW TO USE

**CAUTION:** Ensure that you completely understand this instruction manual before using your eSUN™ Folding Solar Power Panel.

##### 1. Vehicle Batteries

Application: Trickle charges and maintains car/RV/marine batteries.

Recommended use: Connect 12 V vehicle power plug to the 8' extension accessory cable and then to the Folding Solar Panel. Insert the 12 V vehicle power plug directly into your car's cigarette lighter outlet. Place the solar charger so that it receives direct sunlight.

OR

Applied with care, battery clamps accessory cable may also be used and attached directly to the battery from the solar panel. It is the user's responsibility to consult battery manufacturer for recommended charging method.

##### 2. Laptop Computers

Application: Additional run time for Laptop Computers

##### 3. Consumer Electronics

**Handheld Devices, Rechargeable Batteries, 12 V Accessories**

Application: Care **MUST** be taken by the user connecting a solar panel to small electronic devices. The user must consult with the device manufacturer prior to connecting electronic devices to a solar module directly to ensure that the device can be directly connected to a solar module with an open circuit voltage as high as 25 volts.

#### FAQs

**How do I know that my eSUN™ Folding Solar Power Panel is working?**

Check the charge indicator light or bar on the handheld electronics or accessory. For battery charging, the product can be tested with a volt meter.

**Will this product drain my battery at night?**

No. The eSUN™ Folding Solar Power Panel has a built-in blocking diode that prevents the solar array from discharging your battery at night.

**What happens if the solar power panel gets wet?**

The eSUN™ Folding Solar Power Panel is made from water-resistant material. Wipe the product with a clean, dry cloth and allow the product to dry before folding for storage. **DO NOT** keep the product in or underwater.

**Can I leave the solar power panel outside for continual use?**

Yes the eSUN™ Folding Solar Power Panels are designed for portable outdoor use. To prolong the life of the eSUN™ Folding Solar Power Panels we recommend once your application is finished charging (see charge times from chart), wipe the product with a clean, dry cloth, allow the product to dry, fold and store.

**Should the solar power panel be disconnected from the car battery when starting the engine?**

No, the solar power panel can remain connected and will not affect operation of the vehicle or any of the vehicle's electronic components

#### 2-YEAR LIMITED WARRANTY

This eSUN™ product carries a two (2) year limited warranty against defects in workmanship and materials affecting performance. Mobile-Energy agrees to replace the defective product free of charge, within the stated warranty period, when returned by the original purchaser with **proof of purchase**. This product is not guaranteed against wear or breakage due to misuse and/or abuse. In addition, any units that show signs of creasing or folding on the active photovoltaic areas are not covered under this warranty.

**NOTE:** Since the conditions or methods of operation, use and maintenance of PV modules are beyond its control, the Manufacturer does not assume responsibility and expressly disclaims liability for loss, damage or expense arising out of or in any way connected with such operation, use or maintenance.

**WARNING – Folding Solar Power Panel generates electricity when exposed to light, even when not connected in a circuit. Shocks and burns can result from contact with module output wiring, misuse or improper connections. Contact battery manufacturer for questions on battery specifications before charging.**

#### TROUBLESHOOTING

- Inspect the connections between eSUN™ Folding Solar Power Panel and the device you are attempting to charge.
- Inspect all plugs, outlets, clamps, connectors and cables to ensure they are not damaged or cut.
- If the connections are all secure, use a volt meter or 12 V test light to check voltage between the positive and negative electrodes. This check should be done using the 12 V vehicle power plug.
- For vehicle and AA/AAA battery charging, check to make sure that the battery is in good condition. Over time battery performance decreases. If the battery performance is weakened, the battery may need to be replaced.
- Note: Some portable electronics such as computers require more power (current) than the solar power panel produces. If problems persist you may require a larger solar power panel.