



SOLAR STIK®

Category: Power Generation

# Solar Expedition 450W

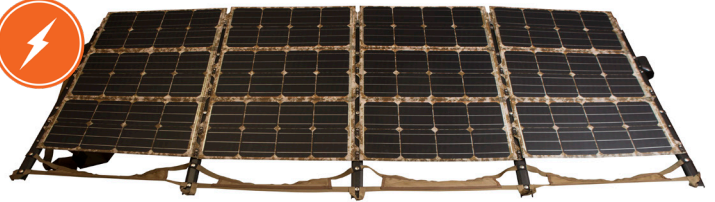
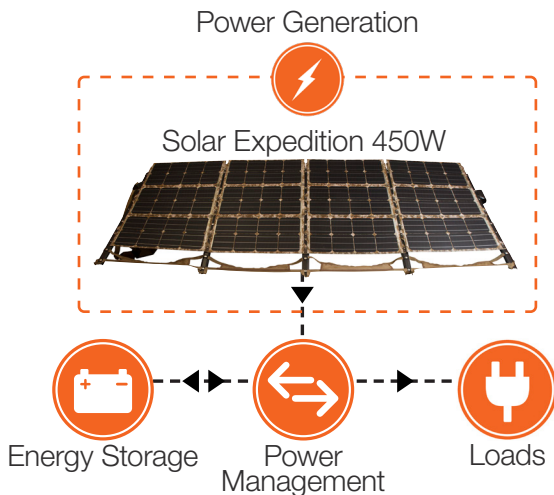
Item # 11-1000020

## Solar in a Snap

The Solar Expedition 450W pairs the latest photovoltaic (PV) technology with straightforward setup. The array is transported in a single case, and one person can set up the 44-pound kit with rollable composite frame in five minutes—no tools required. Three frame-tilt positions are available for maximum sunlight exposure.

## How a Solar Expedition Works

Sunlight is absorbed by the array's high-efficiency PV panels. The DC current generated by the panels is funneled through an appropriate power manager so the energy can be used to charge batteries and/or to power loads.



Transport Case with components

## Features

- ~ 2.25 kWh daily power generation\*
  - High-efficiency monocrystalline cells
  - Adjustable-pitch frame optimizes sun exposure
- Lightweight construction
  - Rollable composite frame
  - Non-glass, antireflective, and antistatic panels
- Modular and scalable with additional panels
- Includes Pelican case for secure transport
- MIL-STD-810G tested; GVT Safety Confirmation for worldwide deployment

\*Based on five hours of solar irradiance

## Why Solar Stik?

Modular, Scalable Architecture  
Field-proven, Rugged Designs  
Experienced Team  
24/7 Tech Support



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## General

Frame Construction	Composite, rollable frame
Frame Adjustment Angles	0, 30, or 45°
Solar Panel Construction	Non-glass, antireflective, antistatic, and low-visibility front surface
Ground Securing	Sandbags/stakes
Setup/Stowage Time	5 minutes
Transport Case	Pelican iM 3220
Warranty	1-year materials and workmanship
Certification	MIL-STD-810G tested

## Solar Panel (@ 77 °F/25 °C)

Max Power (Pmax)	112 W
Rated Voltage (Vmp)	12.9 V
Open Circuit Voltage (Voc)	15.9 V
Rated Current (Imp)	8.81 A
Short Circuit Current (Isc)	9.0 A
Cell Type	Monocrystalline silicon passivated emitter rear contact
Cell Efficiency (%)	> 18%

## Connections

Solar Panel Connectors	(1) H4/MC4, (1) H4/FC4
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## Environmental

Operating Temperature	-4 to 140 °F (-20 to 60 °C), including solar loading
Storage Temperature	-25 to 160 °F (-31.7 to 71 °C)
Max Operating Wind	<ul style="list-style-type: none"><li>Average steady state 50 mph (22.4 m/s) with provided ground securing</li><li>Gust 60 mph (26.8 m/s) with provided ground securing</li><li>Solar Array includes stabilization (ground securing) required to operate in the wind environments mentioned above</li></ul>
Max Teardown Wind	Average 25 mph (11.2 m/s) with provided ground securing
Hailstone Impact	Resists 1-inch hail at 50 mph
Intrusion Protection	IP67



## Performance Specifications (@ 77 °F/25 °C)

Array Voltage	52 V
Array Current	8.81 A
Array Power	458 W
Number of Solar Panels	4

## Weights and Dimensions (L x W x H)

Solar Panel Weight	7 lb (3.2 kg)
Assembled Weight	44 lb (20 kg)
Transport Weight	74 lb (34 kg) 82 lb (37 kg) with 30 ft solar leash (sold separately)
Solar Panel Dimensions	Folded: 14 x 27.8 x 0.75 in (36 x 70.6 x 1.91 cm) Assembled: 44 x 30 x 0.5 in (112 x 76 x 1.3 cm)
Assembled Dimensions	48 x 24 x 120 in (121.92 x 60.9 x 304.8 cm)
Transport Dimensions	47 x 17 x 10.8 in (119.38 x 43.18 x 27.432 cm)

## Includes

- (1) Transport case
- (1) Frame
- (4) Quarter panels
- (10) Stakes
- (12) Sandbags

*Solar Expedition Leash not included, but can be stored inside transport case (30 ft only)*

## Recommended Components and Accessories



**24VDC Solar MC4/Bayonet Cable**  
30 ft - Item # 16-0800102



**24VDC Solar Bayonet Extension Cable**  
25 ft - Item # 13-0000057  
50 ft - Item # 13-0000066  
75 ft - Item # 13-0000067



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