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smart power. brilliant solutions.

sunboard 7/14/27 Watts

swiss made

shockproof solar panel

Operating instructions

Product Description: shockresistant panel for 12 Volts batteries.

Product Specifications (@ STC*):

Specifications	Sunboard 7 W	Sunboard 14 W	Sunboard 27 W
Operating Voltage (VDC)	15	15	15
Operating Current (mA)	450	900	1800
Weight (Kg)	0.72	1.2	2.2
Dimensions (mm)	350 x 695	350 x 1310	642 x 1310

* measured @ Standard Testing Conditions (STC): 1000W/m2, AM 1.5, 25°C

Temperature Operating Range: -20°C to +60°C

Disclaimer of Liability
This user's manual contains safety, installation, performances, maintenance and technical information which you should be familiar with before using your Flexcell solar charger. Please read it carefully!

Caution
Photovoltaic modules produce electricity when exposed to light. The voltage from a single module is not considered hazardous, however, if connected in series in order to increase voltage, the shock hazard increases.
When working around batteries and other electrical equipment, please observe industry standards and manufacturer's safety procedures.

"DOs and DON'ts"
• Make electrical connections to or from the Sunboard preferably in low light conditions to reduce risk of electrical sparking.
• Make connections in well-ventilated area free from flammable gases or vapours.
• Check polarity! All connections must be positive (Red, +) to positive and negative (Black, -) to negative. Incorrect connection will damage the Sunboard and may result in electrical shock or fire hazard.
• DO NOT attempt to recharge NON-RECHARGEABLE batteries.
• In any case, securely mount the Sunboard on a supportive fixed surface or canvas so that the total circumference of the panel is supported.

Installation Instructions
1) Select best mounting location.
Mount the Sunboard, with the cell side oriented to the sun, in a location that will receive good direct sunlight throughout the day. For maximum charging performance, position the solar panel to face noon time sun.
2) Use corner grommets to properly tie or fasten the Sunboard to a fixed surface or canvas. The solar panel must be properly supported to avoid bending by gravity.
3) Connect the solar panel cord at of the junction box to the 3 meter extension cable.
4) Identify the correct polarity (Red+, Black-) and connect the red terminal of the 3 m elongation cable to the positive post of the battery, charge controller or any other 12 Volts device, and the black terminal to the negative post.
Warning: reverse connection to the battery is a fire hazard and could damage your solar panel.
5) You may leave the panel permanently connected to your battery since is a blocking diode in the panel junction box blocks reverse leakage of current from the battery at night.

FAQs
How do I know which Sunboard's size I need?
Consult the application chart below.
How do I know if the Sunboard is working?
You can check the solar panel ouput with a voltmeter.
Will this product drain my battery at night?
No. There is a built-in blocking diode to protect against reverse draining of current.
Can I leave it outside permanently?
Yes, if properly mounted and secured to avoid damage from winds. Terminals should be kept clean and firmly connected.
What if the product gets wet?
No problem. The product is waterproof.
What if the product goes under water?
Simply wipe the product with a dry cloth. Avoid having the product completely submerged for an extended period of time.
How do I clean and maintain it?
The Sunboard requires practically no maintenance. Simply wipe the surface with a damp cloth or with a mild soap solution to clean the panel. Do not use any abrasive cleaner or solvent as this would damage the panel.
Do I need a charge controller?
A charge controller is used to prevent overcharging. A charge controller should be used if the current output of the solar panel (in Amps) is more than 1% of the battery capacity (in Amp-hours). Consult the battery manufacturer for complete battery information and recommendations. As an example, with a Sunslick 7 Watts (450 mA), a charge controller would be recommended with a battery that is less than 45 Amp-hours.

Troubleshooting
1) Connection - inspect your wiring for any sign of loose wires or corrosion. Check polarity!
2) Voltage - Using a voltmeter, test the open circuit voltage between the positive (Red+) and negative (Black-) terminals.
3) Battery - Ensure your battery continues to be able to be recharged. Contact your battery's manufacturer for more detailed guidelines on battery testing.
4) Size - Make sure you are using a properly sized system. Consult the application chart for guidelines.

Warranty, limitation of liability
To the fullest extent permitted by law, Flexcell (VHF-Technologies SA, Av. des Sports 26, 1400 Yverdon-les-Bains, Switzerland) makes no warranties express or implied, including, but not limited to any condition, warranty or term as to satisfactory quality or fitness for purpose except the following: Flexcell grants the original Purchaser of this product a limited three (3) years warranty on the electrical performance of the module and a two (2) years warranty on defects of material and workmanship: we guarantee that this unit will produce a minimum of 70% of its rated electrical performance for a period of three (3) years from the purchase date, and that this product is free of defects in materials and workmanship for a period of two (2) year from the purchase date. Upon purchase or receipt, Purchaser shall inspect and/or test the quality of the delivered Goods as soon as it is customary in accordance with usual business practice. Purchaser shall notify Seller immediately from the date an alleged failure to conform with the specification(s) is discovered. If Purchaser fails to examine the quality of the Goods or give notice according to this provision, the Goods are deemed to have been accepted and any claim of breach of warranty with respect to such Goods shall be waived. This warranty does not cover any product, which has been damaged by or acts of God, misuse, neglect or improper installation or application, or negligence in use, storage, transportation or handling, or repair by anyone other than flexcell. Operating instructions are communicated to Purchaser together with any purchased Goods.
Flexcell shall not be responsible for any damage to persons or property caused by misuse or improper handling of this product, or for any loss of profit, expense, or other incidental, consequential or special damages arising out of the use of, or inability to use, the product.
The maximum liability to Flexcell under this warranty shall not exceed the purchase price of the product. Products returned under this warranty to Flexcell or an authorized Flexcell distributor, will be either repaired or replaced free of charge, or refunded at purchase price, at the option of Flexcell.
This warranty does not cover any transportation costs for return of module or for reshipment of any repaired or replaced module, or costs associated with installation, removal, reinstallation or adaptation, modification of the original product.
This warranty is only applicable if the returned product is accompanied by the original invoice (purchase date and name of retailer must be indicated). Flexcell will accept no return without prior authorization.
Any other form of warranty given by the retailer is entirely his own responsibility and no person is authorised to change the terms of this warranty of the manufacturer.
The warrantee does not affect the Purchaser's rightsunder governing national laws as to consumers' rights.

Accessories
Consult the Flexcell website at www.flexcell.com to get the latest update on solar accessories.

Application
First connect your solar panel via the AMP Superseal IP67 waterproof connector to the 3 m extension cable (included).

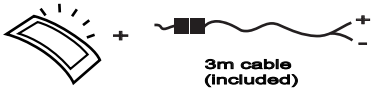
Then either connect direct the Sunboard to a 12 V battery with the appropriate terminals (not included),

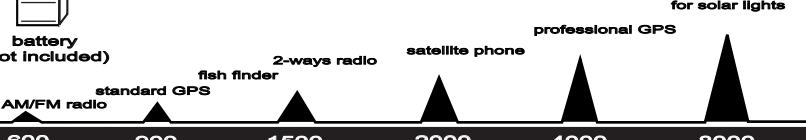
or connect your solar panel, your battery and your load (e.g. a light) to a charge controller (not included).

sunboard
Application Chart

3 years warranty

semirigid | shockresistant | waterproof





battery capacity (mAh) / charging time in hours (@STC*) :	600	900	1500	2000	4000	8000
7W 15VDC 450mA	1h20	2h00	3h20	4h30	9h00	18h00
14W 15VDC 900mA	0h40	1h00	1h40	2h15	4h30	9h00
27W 15VDC 1800mA	0h20	0h30	0h50	1h10	2h15	4h30