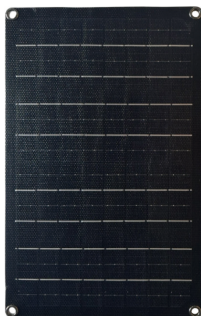




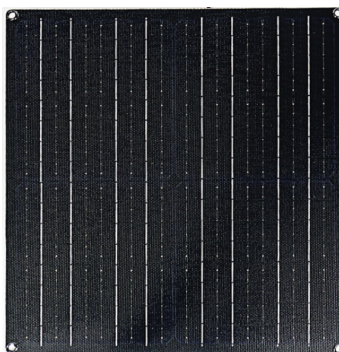
Semi Flex Solar Panel

User Manual



14 Watt

Item #14014



26 Watt

Item #14026



WARNING: Read carefully and understand all assembly and operation instructions before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

SAVE THESE INSTRUCTIONS

Important Safety Information

Thank you for choosing a Ecawareness Product.

Save the receipt and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This product is designed for certain applications only. the distributor cannot be responsible for issues arising from modification. We strongly recommend this product not be modified and/or used for any application other than that for which it was designed. If you have any question relative to a particular application, Do not use the product until you have first contacted the distributor to determine if it can or should be performed on the product.

WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be a safer experience and do the job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.



WARNING

This product can expose you to chemicals, including Di (2-ethylhexyl) phthalate (DEHP) which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov



ADVERTENCIA

Este producto puede exponerlo a productos químicos, incluidos Di (2-etilhexil) ftalato (DEHP) que el estado de California sabe que causa cáncer, defectos de nacimiento u otros daños reproductivos. Para obtener más información, vaya a www.p65warnings.ca.gov

Cautions

- Never touch the end of output cables with your bare hands when the modules are irradiated. Handle wires with rubber-gloved hands to avoid electric shock.
- Do not wear metallic jewelry when working on electrical equipment.
- Product should be installed and maintained by qualified personnel.
- Do not drop tool or other item on the glass of the solar module.
- Do not scratch the back film of the solar panel.
- Avoid exposing solar panels to partial sunlight or shadows. Partial sunlight can cause hot spots on the panel.
- Do not pour chemicals on module when cleaning.
- Keep module away from children.

Precautions when working with batteries

- Never smoke or allow a spark or flame near the batteries.
- Batteries generate hydrogen and oxygen during charging resulting in evolution of explosive gas mixture. Care should be taken to ventilate the battery area and follow the battery manufacturer's recommendations.
- Batteries contain very corrosive diluted sulphuric acid as electrolyte. Precautions should be taken to prevent contact with skin, eyes or clothing.
- Use caution to reduce the risk of dropping a metal tool on the battery. It could spark or short circuit the battery or other electrical parts and could cause an explosion.
- Remove metal items like rings, bracelets and watches when working with batteries. The batteries can produce a short circuit current high enough to weld a ring or the like to metal and thus cause a severe burn.
- If you need to remove a battery, always remove the ground terminal from the battery first. make sure that all the accessories are off so that you do not cause a spark.
- Use properly insulated tools only when making battery connections.

Precautions when working with solar panels

With the incidence of sunlight or other light sources on all solar panels, a voltage appears at the output terminals of the solar panel turning it into a source of electricity. To avoid a shock hazard make sure the solar panel is covered with an opaque (dark) material such as paper/cloth during the installation. Do not make contact with the terminals when the panel is exposed to sunlight or other light sources.

Precautions when working with Charge Controllers

If two or more solar panels are connected in series/parallel make sure that the sum of the short circuit current ratings of all panel strings does not exceed 80% of the charge controller's current rating.

Intended Use

Semi-Flexible panels are weather, water and corrosion resistant making them a perfect option for marine applications, RVs, camping and emergency back up. This panel can continuously recharge your 12V batteries with the power of the sun. Light enough to mount on a window with suction cups and durable enough to mount permanently outdoors on a range of vehicles.

Parts List

Parts Description	Quantity	
	14014	14026
Solar panel	1	1
SAE to Oring cable	1	1
SAE to battery clamp cable	1	1
SAE to auxiliary power outlet	1	1
SAE reverse polarity Cable	1	1
Suction cup	4	4
Carabiner	2	2
Manual	1	1

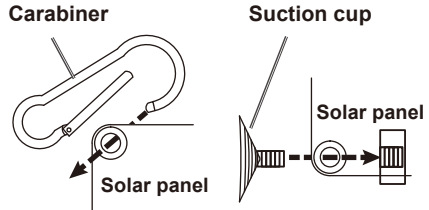
Specification

Property	14014	14026
Solar Cells	Monocrystalline	Monocrystalline
Rate output (Pmax)	14 Watt	26 Watt
Open circuit voltage(Voc)	21.5 Volt	21.5 Volt
Short Circuit Current(Isc)	700 mA	1500 mA
Battery type	Wet / Gel / SLA /AGM	

Operating Instructions

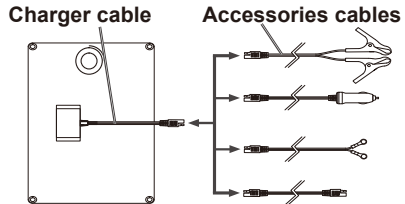
1. Locate/face solar panel toward due south where it will receive full,unobstructed sunlight, especially during midday.For maximum power output,point panel directly at sun.

2. Use included Carabiners or Suction Cups to hang or suspend the solar panel if needed:
Suction Cup's screw rod through panel eyelet to secure Suction Cup in place and tighten the nut. Or Open Carabiner and insert into panel eyelet.



3. Confirm battery clip,12VDC auxiliary power outlet,or ring terminal adapter cable will reach from battery or 12VDC auxiliary power outlet connection to the solar panel.

4. Connect desired adapter cable to battery or 12VDC auxiliary power outlet. To attach the battery clip or ring terminal adapter cable to the battery:



a.Connect POSITIVE(RED)battery clip or ring terminal to POSITIVE (POS,P,+post of battery.

b.Connect NEGATIVE(BLACK)battery clip or ring terminal to NEGATIVE (NEG,N,-post of battery).

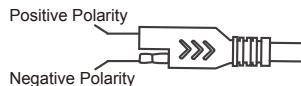
To use 12VDC auxiliary power outlet adapter cable:Plug cable into vehicle's 12VDC auxiliary power outlet.

SAE Reverse Polarity Cable

Your solar panel output terminals, either directly from the solar pane, or via the Charge Controller, are always Female Positive Polarity.

In case you need to have a Female Negative Polarity output, you may use the Reverse Polarity Adapter provided:

CAUTION: Reversing the polarity may damage the electrical appliances! Please check carefully the correct polarity before using.



SAE Reverse Polarity Cable

5. After connecting to battery,connect adapter able to Solar Trickle Charger cable.

WARNING! TO PREVENT SHORT CIRCUIT AND FIRE:Do not leave battery clips attached indefinitely.

WARNING! TO PREVENT SERIOUS INJURY:Do not connect adapter cable battery clips or ring terminals to carburetor,fuel lines,or sheet-metal body parts.

Note: Some vehicle make and model 12VDC auxiliary power outlets may not operate with ignition turned off.Use adapter cables to connect directly to the battery in these instances.

Solar Panels Weekly Power Chart

Please noted all run times/ratings are estimates only and may vary depending on your location, time of day, time of year and are based on 7 Hours of full sunlight per day.

Solar panel Rated Hourly (Maximum output)	14W	26W	50W	100W
	700 mA	1.5 A	2.78 A	5.56 A
Weekly Output	686 W·h	1.27 KW·h	2.45 KW·h	4.9 KW·h
<i>Weekly Power Run Time</i>				
Fluorescent Light 40 watts	17 hr	31 hr	61 hr	122 hr
Laptop 20-50 watts	13 hr	25 hr	49 hr	98 hr
Fan 80 watts	8 hr	15 hr	30 hr	60 hr
PC 80-150 watts	4 hr	8 hr	16 hr	32 hr
40" Television/ Projector 200 watts	3 hr	6 hr	12 hr	24 hr
Coffee Maker 1000 Watts	0.6 hr	1.2 hr	2.4 hr	4.9 hr

FAQ

- **Will this solar panel work with a 24V battery?**

This is for 12V battery charging only. Please call Ecawareness Customer Service for more 24V system configuration.

- **How do solar system work?**

The panel's photovoltaic cells convert the energy in sunlight to electricity, the electricity is then stored in the battery and an inverter will allow you to plug in appliances. there is 4 major components needed to set up your solar off grid system. Solar panels, charge controller to control the charge to the battery bank, a battery for power storage and an inverter to transfer DC power from the battery to an AC power.

- **Do I need a battery to store Power?**

Yes, a battery is needed to store the power from the solar panel, the inverter will also connect to the battery.

- **What size battery can I use?**

The amount of battery storage you need is based on your energy usage. Energy usage is measured in Watts or kilowatt hours over a period of time. You can use any size battery, best used with Deep Cycle batteries. 12V only.

- **Can you connect this to the breaker box in the house?**

No, this is an off grid only solar kit, you can not connect to the breaker box.

- **How should my solar panels be positioned in order to produce the most power?**

In the Northern Hemisphere, The best direction to face solar panels is south. However, using your judgment in figuring out which location gets the most sun, would be helpful.

- **Does the panels need to be in direct sun to work?**

No, although solar panels produce the highest wattage output in direct sunlight, they will still produce power on cloudy days.

- **Will I need solar maintenance?**

Solar panels generally require very little maintenance. They are very durable but should always be cleaned to prevent dust and debris particles from causing shading on the solar panels. batteries might need to be changed every few years.

- **How long does installation take?**

This is a very basic setup plug and play, however, installing the panel to a flat surface might require able bodies with a little bit of know how's.

- **On what roof materials can solar be installed?**

Solar panels can be installed on any roof material that can take the weight of the panel. properly mounted solar panel system is essential, as a an improperly mounted solar panel can cause leaks or other roof issues.

Limited Warranty

Ecawareness warrants our products to the original purchaser that this product is free from defects in materials and workmanship for the period of 1 year from date of purchase, 2 year warranted to generate up to 80% of rated power from date of purchase. In the case of product defect, contact Ecawareness customer service to receive trouble shooting. If defective part or unit should be returned, a Return Authorization Number must be issued by Ecawareness and the defective part or unit should be returned to the authorized location at the purchasers' expense. A dated proof of purchase is required to receive warranty service. Once received at authorized location and defect proves to be the result of defective material and workmanship, the defective part or unit will be replaced at warrantors' option and returned to the original purchaser at warrantors' expense. No refunds will be granted by the warrantor, in the event of buyer's remorse please contact your point of purchase within and in adherence to their return policy. Refunds are granted at the retailers' discretions.



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