



VOLTA SOLAR

Specs

Built on a super thin polymer substrate, the Volta Solar Panel is durable and flexible. The substrate is as thin as 1 mil (0.025MM) thin. Amorphous silicon is the absorber layer in the solar panel. The panel has a strong environmental profile and is cadmium free.

Please note: The Volta Panel is not waterproof. Avoid water coming in contact with the panel (or any other electronics you're working with).

Operating Voltage	4.8
Wattage	.48
Current	100
Typ Voc	6.4V
Typ Isc	130mA
Typ Output @ AM 1.5	110mA @ 4.8V
Width	5.75 in, 146 mm
Length	3.7 in, 94 mm
Weight	.1 oz, 3.9 g

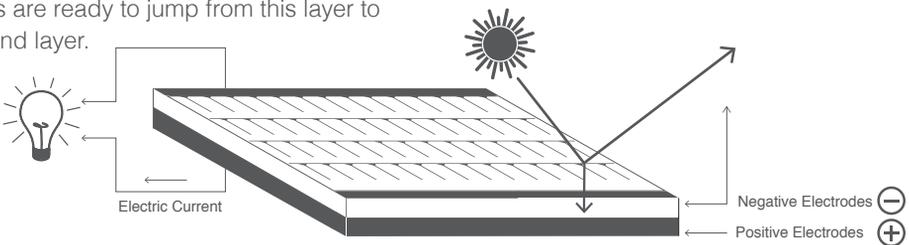
How Solar Panels Work

A solar panel turns the sun's light into electricity. For example, when you turn on a lamp, electrons move through the cord and light up the bulb. That flow of electrons is called electricity.

A solar panel is made up of many solar cells. Each of these cells uses light to make electrons move. The cell is made up of two different layers that are stuck together. The first layer is loaded with electrons, so the electrons are ready to jump from this layer to the second layer.

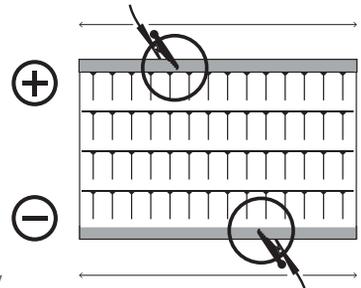
That second layer has had some electrons taken away, so it is ready to take in more electrons. When the sun hits an electron in the first layer, the electron jumps to the second layer.

That electron makes another electron move, which makes another electron move, and so on. It was the sunlight that started the flow of electrons, or electricity.

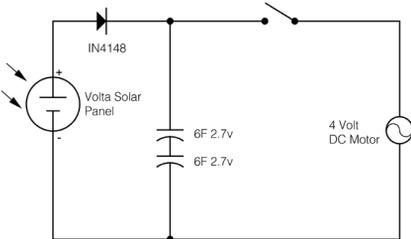


Suggestions

Along each long length edge of the panel you'll find a conductive material (see picture to locate positive + and negative - sides of the panel) for connecting the panel to your project. We've included a set of alligator clip cables to make it easier for you to connect the panel to your own project or experiment.



The alligator clip teeth need to slightly penetrate the silver metallic color connection points on each side of the panel (+ and -) to ensure a good electrical connection.



Try experimenting by connecting a small 4V DC motor to the panel using enclosed alligator clip cables, or build a Circuit using a Diode (Digi-Key Part No: 1N414DICT-ND), a set of Capacitors (Digi-Key Part No: 283-4204-ND) and a Switch (Digi-Key Part No: 679-1848-ND) using the Volta Solar Panel to charge the capacitors and power your device (refer to circuit diagram).