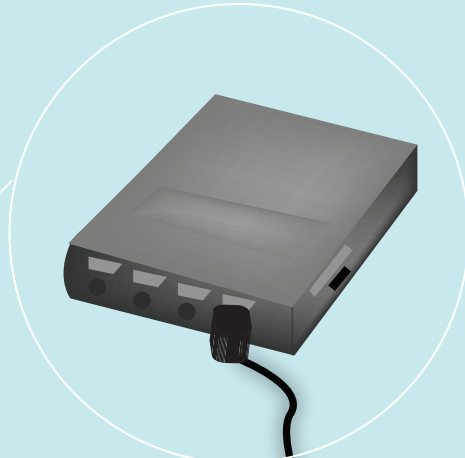
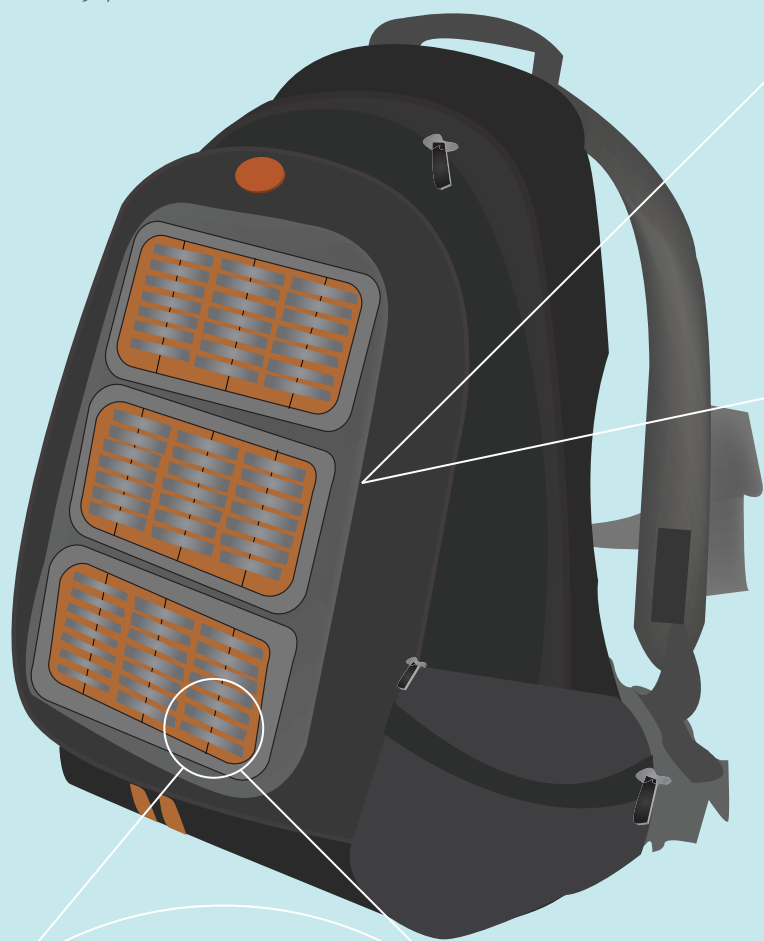
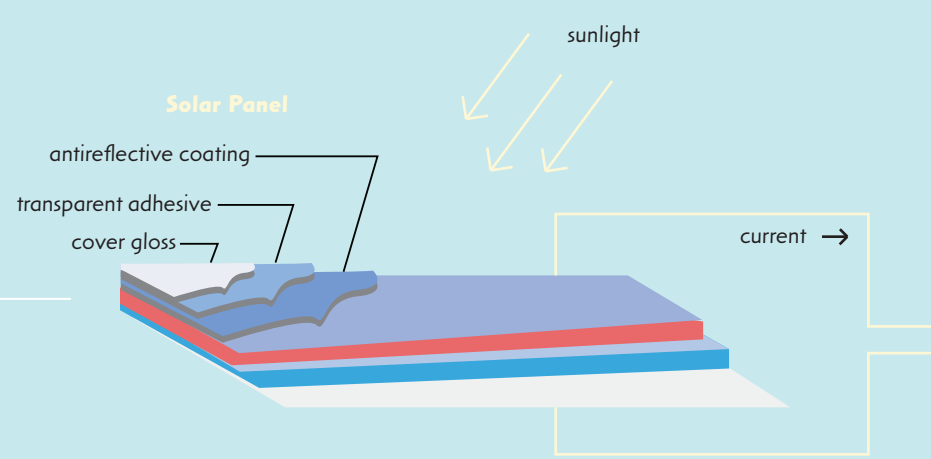
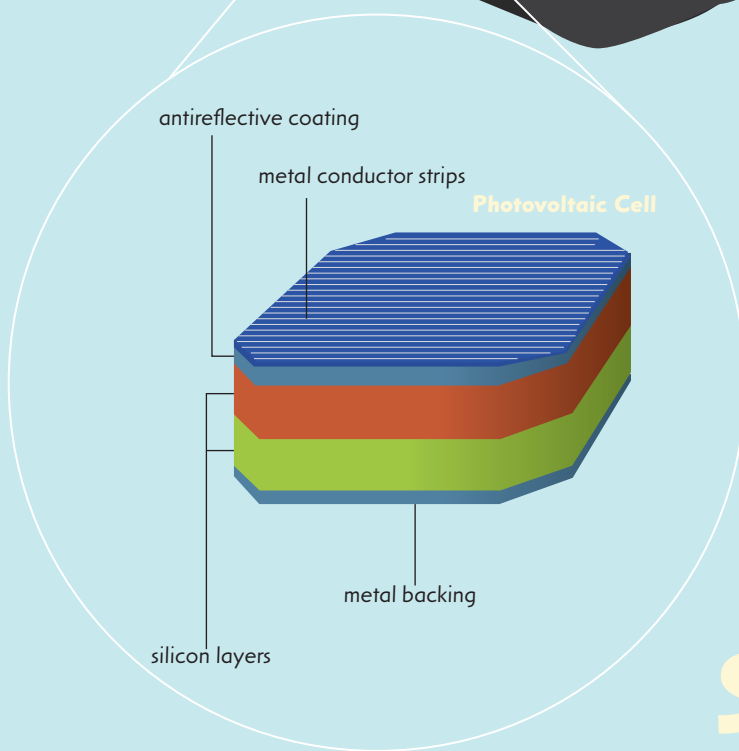


### Solar powered Backpack

You can't go anywhere nowadays without a cell phone, laptop, pda, or other hand-held electronic devices. These devices run on batteries and can, in the bigger picture, use a ton of energy. This product solves two problems. First would be solving the issue having to find a place to charge your device. Second being reducing the energy cost of charging your various devices. This back pack stores solar energy into a battery pack within the back pack. This mobile battery is then used to plug in and charge your various devices while on the move.



The storage capacity of the power bank at 10,000mAh is impressive and offers output options of 19v, 13~16.8v, 13v & 9v @ 3.5A and 5V@ 1A. This is enough power to serve for almost any portable device you might possess.



### Solar into Electricity

To figure out how a solar-powered backpack works, we need to understand a little bit about the mechanics of the solar-powered backpack, or solar technology. It may seem complicated, but it's really pretty simple -- photovoltaic (PV) cells are what make it all happen. The cells, grouped together as modules or panels, collect light from the sun and convert it to usable electricity. They're able to do so with the help of something called a semiconductor. These are substances that can conduct electricity. In the case of solar cells, silicon is the semiconductor of choice.

### How Solar Cells Work

When sunlight hits a solar panel, the silicon semiconductor absorbs a portion of the light and its energy. When this happens, electrons in the silicon are knocked loose and they begin to flow freely. Electric fields in the photovoltaic cells wrangle those electrons and force them to flow in one direction like a cattle rancher guiding his herd. This creates an electric current that can be harnessed by attaching metal contact points at the top and bottom of the PV cell. Once the energy is collected, it can be used immediately as electricity or stored in a battery or series of batteries for later use.

The silicon semiconductor is naturally shiny and reflective, which isn't great for drawing in sunlight. To solve this issue, an antireflective coating is applied to the cell to keep energy loss at an acceptable five percent or less. Add a protective covering to the panel and you have an energy-harnessing machine. This is enough to get you a basic understanding of how this solar technology works.

### The History of Solar Power

Is very vast, broad, and goes in many different directions. The important parts leading up to where solar is today are highlighted here

- 1905 Albert Einstein publishes a paper on the photoelectric effect
- 1916 Robert Millikan provided experimental proof of the photoelectric effect
- 1932 Albert and Sora discover the photovoltaic effect in cadmium sulfide
- 1954 Photovoltaic technology is born in the US with the silicon photovoltaic cell
- 1958 Hoffman Electronics achieves 9% efficient photovoltaic cells
- 1962 Bell Telephone Labs launches the first telecommunications satellite, the telstar (initial power 14 watts)
- 1972 France installs a cadmium sulfide photovoltaic system to power a educational TV in Niger
- 1976 David Carlson and Chris Wronski fabricate first amorphous silicon photovoltaic cells
- 1982 Worldwide photovoltaic production exceeds 9.3 megawatts
- 1994 First solar dish generator using a free-piston stirling engine is tied to a utility grid
- 2001 Two new thin-film solar modules, developed by BP Solar, break performance records
- 2001 Powerlight Corporation installs the largest rooftop solar power system in the US