



# What are the photovoltaic panels manufactured by aerospace called

What is PV technology & how does it work?

PV technology is widely recognized as a way of producing electricity by employing photovoltaic panels made of an array of solar cells to transform solar energy into electron flow. This technology's initial practical application was to energize communication satellites and spacecraft.

How do solar panels work on spacecraft?

To increase the specific power, typical solar panels on spacecraft use close-packed solar cell rectangles that cover nearly 100% of the Sun-visible area of the solar panels, rather than the solar wafer circles which, even though close-packed, cover about 90% of the Sun-visible area of typical solar panels on Earth.

What is space photovoltaic technology?

These space activities require a cost-effective, sustainable source of onboard energy, such as solar photovoltaics. Traditionally, space photovoltaic technology is based on group III-V materials (such as gallium arsenide with indium phosphide and germanium for multi-junction cells) due to their high performance and radiation resistance.

Are solar cells a reliable energy source for aerospace applications?

Solar cells (SCs) are the most ubiquitous and reliable energy generation systems for aerospace applications. Nowadays, III-V multijunction solar cells (MJSCs) represent the standard commercial technology for powering spacecraft, thanks to their high-power conversion efficiency and certified reliability/stability while operating in orbit.

Who makes spacecraft solar cells?

Spectrolab Inc., a Boeing Company, is the world's largest manufacturer of spacecraft solar cells. In 2009, Spectrolab broke another industry record when it announced the completion of its latest technological innovation, a solar cell with the ability to convert 41.6% of the sun's rays into electrical power, a first in the solar cell industry.

Where do Spectrolab solar panels power?

Spectrolab's solar cells and panels power satellites in Earth's orbit, as well as the International Space Station. Note: The International Space Station's solar panels are equipped with 275,000 silicon cells. The solar panels are also the largest power generating panels ever deployed in space with a total power output of 200kW.



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