



## 6U, 12U Solar Panels

### OVERVIEW

Cubesat compatible (6U, 12U).

Customized sizes in honeycomb substrates, polyimide, aluminum.

Manufactured according to ESA standard ECSS-E-20-08C.



### FEATURES

- Electronic components qualified for military or aerospace applications. Rad-Hard components.
  - Designed and manufactured with space-qualified materials offering customized solutions for your mission.
  - Solar cell assemblies with Triple Junction on Ge substrate (29-30% efficiency).
  - Covered Interconnected Cell (CIC) with integrated bypass diode and coverglass, aerospace qualified.
  - No wiring on panel. PCB substrate manufactured in conformance with ECSS-Q-ST.
  - Customized design solar panels according to customer needs and deployable solar panels.
  - Integrated sensors into PCB substrate, as magnetometers, temperature and sun sensors.
- Testing capabilities: random, shock, acoustic, TVAC, thermal cycling, illumination, deployments.



dhv technology is a ISO 9001 and ISO 14001 certified company.

[www.dhvtechnology.com](http://www.dhvtechnology.com)

Parque Tecnológico de Andalucía, Av. Juan López Peñalver 21, 29590, Málaga, Spain

00 34 951 956 837

[dhv@dhvtechnology.com](mailto:dhv@dhvtechnology.com)

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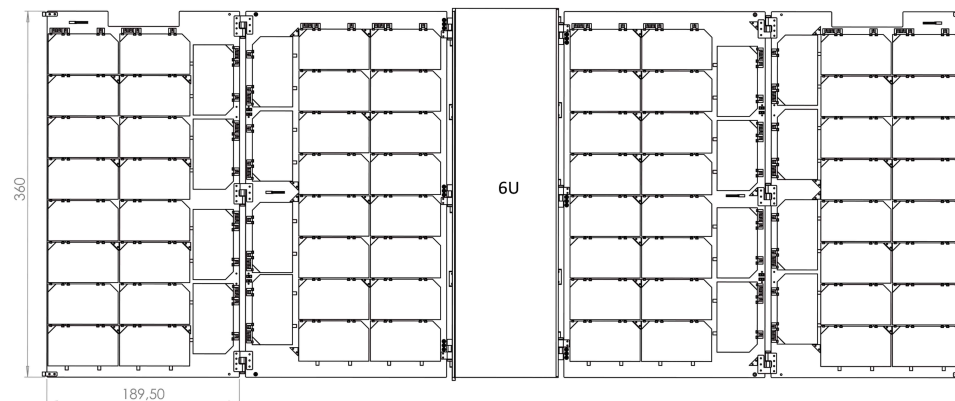
## Design and Manufacturing Photovoltaic Assemblies for Space

Our solar panels are customisable in order to meet with the EPS requirements for every project, but normally, a 6U or 12U solar panel deployable or non-deployable, have the following parameters:

Solar panel parameters*	6U	6U deployable**	6U deployable**	12U	12U deployable**
Power (AMO WRC) 1367 W/m <sup>2</sup> ; T = 28 °C	20W (one solar panel)	40W (2 solar panels per wing)	60W (3 solar panels per wing)	20W (one solar panel)	60W (3 solar panels per wing)
Part Number	SPC-CS60	SPC-CS60	SPC-CS60	SPC-CS12	SPC-CS12
Available sensors	Magnetometer Temperature sensor Sun Sensor	Magnetometer Temperature sensor Sun Sensor	Magnetometer Temperature sensor Sun Sensor	Magnetometer Temperature sensor Sun Sensor	Magnetometer Temperature sensor Sun Sensor
Mass Substrate (1-1.4mm)	<300 g	<600 g	<900 g	<300 g	<900 g

\*These parameters could be changed to fulfil the electrical requirements for each project EPS.

\*\*Each deployable is a set of solar panels, so it is a multiple choice of a single solar panel: Triple deployable= 3 x single solar panel



The SCA series connection can reach voltages up to 21.7 V in a 6U size. The string can be placed either on honeycomb or PCB substrates using a space grade film adhesive with ultra low outgas properties. This adhesive is made of silicone free or highly viscosity components which ensures a strong bonding. The SCA string is connected to the EPS in the satellite using a 4-6 pins harness. Power and ground lines only use two pins and the rest of them may be used for magnetometers or temperature sensors. Solar Panels are supplied with a protective Kapton coverlay on the surface. The PCB substrates are made in conformance with ECSS-Q-ST-70-11C. Solar panels are manufactured following the standard ECSS-E-ST-20-08C.



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