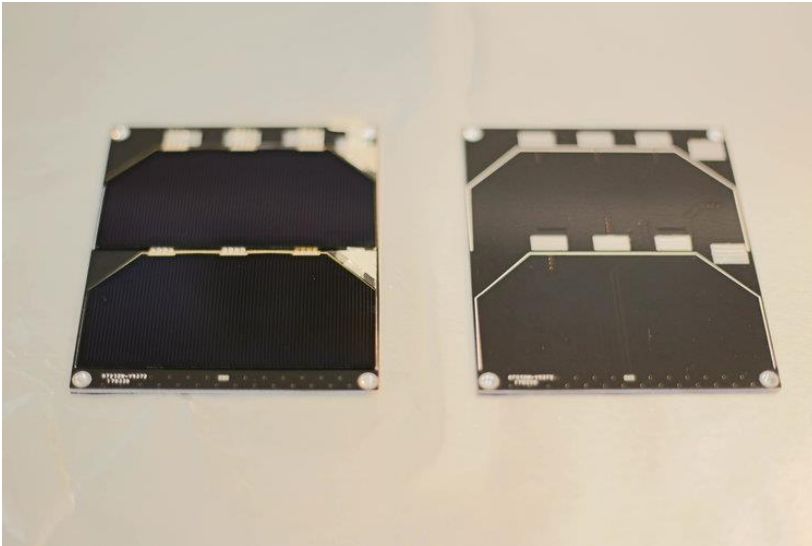


# 1U Solar Panel

Cassiopeia Cubesat Ecosystem



## Built-in Sensors

A LM76 temperature with serial bus interface comes standard with the solar panels. A 3.3V power supply needs to be provided by the user. At the same time, an analog output photodiode is provided as a sun sensor and is routed to the interface connector.

## Handling and Integration

Standard solar panels are provided with one power and one interface 15 pin Molex FPC connector. This is compatible with the Cassiopeia EPS, allowing plug-and-play operation. Custom connectors and pinouts are available upon request. The panel mounting holes are designed for Cassiopeia 1U structures. When ordering, please note that X and Y panels are mechanically different.

Handle in a clean and dust-free environment to prevent contamination. Do not come into contact with the cell surfaces

## Cell Characteristics

Each panel utilizes two 30.5% radiation hardened triple junction solar cells bonded to the substrate with RTV. Cells are qualified according to ESA specifications and CASC Doc. Ru479.0061JT and have been proven in-flight. Silicone bonded 0.12mm cover glass with antireflective coating come as standard.

Each cell measures 80.15mm X 40.15mm.

High quality, robust, triple junction 30.5% solar panels with built in sun and temperature sensor.

At a glance:

- 30.5% Triple junction solar cells
- Cover glass as a standard option
- Integrated sun sensor and LM76 temperature sensor
- Fully radiation hardened version available upon request
- Individually tested and characterized

Height	98mm
Width	82mm
Mass	43g
Nominal Voltage	4400mV
Nominal Current	1.02A
Efficiency	30.5% ( $\pm 0.5$ )

\*Tested at 135.3W/m<sup>2</sup> irradiance and at 25°C.

The solar panels have passed random vibration, thermal cycle, thermal vacuum, and outgassing tests. Each unit is vibration tested prior to shipment and packed in a clean container. Each cell comes with an individual test and performance report. Contact Aphelion for alternate configurations and to inquire for compatibility with other products.

## Pricing

\$1695 – X/Y Panels

\$1755 – Z-Facing Panels