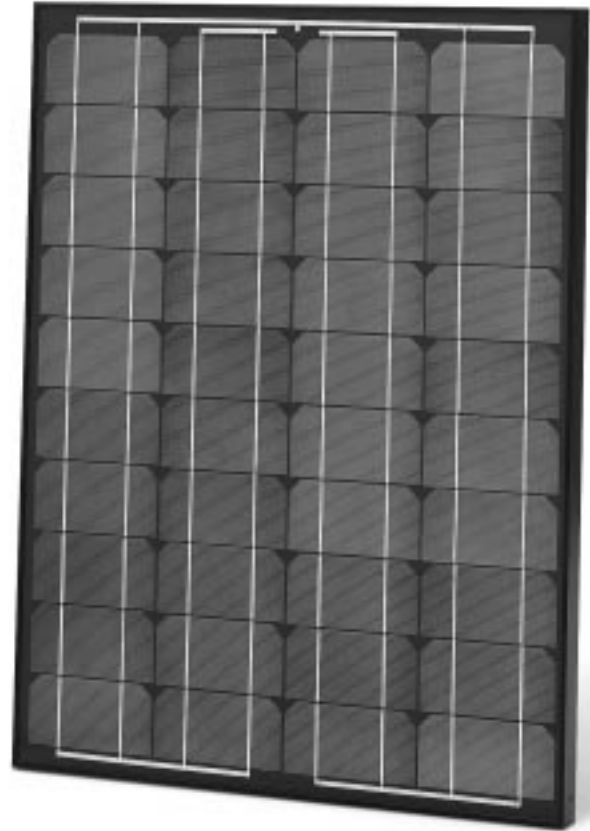


AP-50 PHOTOVOLTAIC MODULES

AstroPower's AP-50 solar module utilizes the AP-106 high-efficiency six-inch single crystal solar cells, the largest solar cells commercially available today. Single crystal solar cells have been the industry standard for the past twenty years, with hundreds of thousands of installations worldwide. Using this same proven technology, AstroPower has combined their high reliability with large-area economies of scale to address the 50-watt power range.

The AP-50 is particularly well suited to single module applications requiring a minimum of 50 watts and 3.0 amps of charging current, such as rural home-power systems. This module can also be easily installed in multiple module arrays for higher power applications.

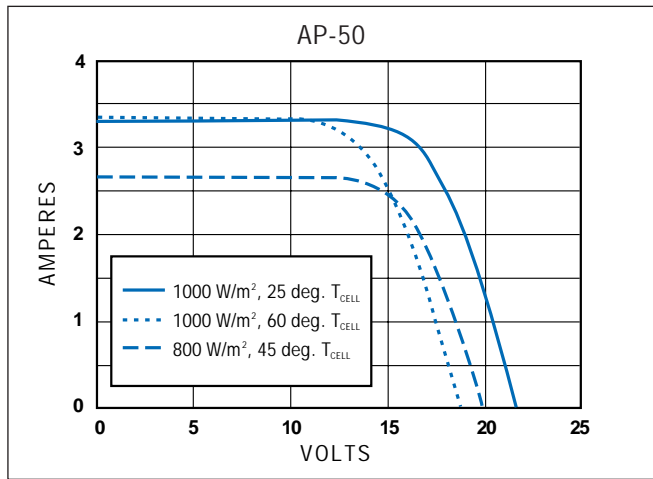
Each solar module utilizes industry standard construction techniques to ensure long life even in the most severe environments. This module meets applicable industry and consumer standards for safety and reliability, and is covered by a comprehensive twenty year warranty.



MODULE FEATURES

- Each module contains 40 series-connected AP-106/2 solar cells for optimum battery charging performance in hot climates or low light levels.
- Power output of 50 watts and 3.0 amps in full sunlight is ideally suited to many single module applications.
- A practical square shape and heavy duty anodized aluminum frame allows for single-module installations or multiple module arrays using industry-standard mounting racks.
- Weather resistant junction box, including protective bypass diodes, allows for easy and safe field interconnection.
- UL Listed
- Twenty year warranty.
- Manufactured in black frame/blue tedlar.

ELECTRICAL/MECHANICAL CHARACTERISTICS



TYPICAL ELECTRICAL/MECHANICAL PARAMETERS

Nominal Operating Cell Temp. (NOCT)	45°C (Determined under: Irradiance = 800 W/m²; ambient temperature = 20°C; wind speed = 1m/s)
Short Circuit Temp. Coefficient	+0.9mA/°C
Open Circuit Voltage Coefficient	-0.10 V/°C
Typical Fill Factor	70%
High Voltage Standoff Potential	2200 Volts
Ground Continuity of Frame	< 1 ohm
Weight (Wind) Bearing Potential	50 lbs/ft² (125 mph equiv.) (2400 N/m² (200 kph equiv.))
Hailstone Impact Resistance	1" @ 50 mph (24 mm @ 80 kph)

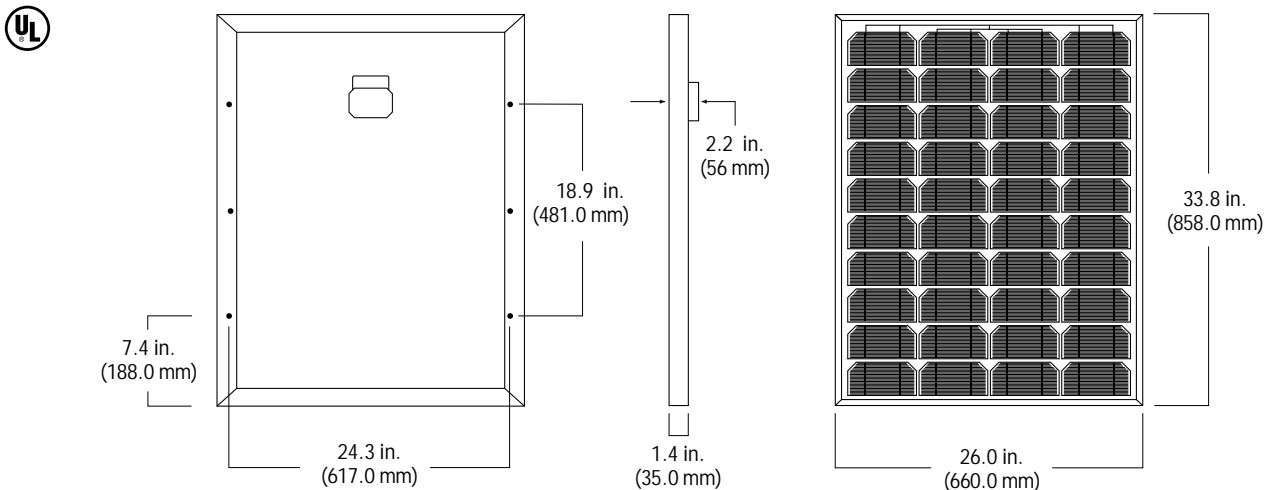
TYPICAL OUTPUT SPECIFICATIONS

@ Standard Test Conditions (defined as: Irradiance = 1000 W/m²; cell temperature = 25°C; solar spectral irradiance per ASTM E892 (air Mass = 1.5))

Peak Power * (W_p)	50	Watts
Open Circuit Voltage (V_{oc})	21.5	Volts
Max. Power Voltage (V_{mp})	16.7	Volts
Short Circuit Current (I_{sc})	3.3	Amps
Max. Power Current (I_{mp})	3.0	Amps
Weight	16.6 lbs. (7.5 kg)	
Dimensions	33.8 x 26.0 x 1.4 in. (858.0 x 660.0 x 35.0 mm)	

*rated power tolerance ±10%

AP-50 PHYSICAL SPECIFICATIONS



Note: Mounting hole diameter is .26" (6.6 mm).

