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**Solar Panel Guide  
Specification Data Sheet**

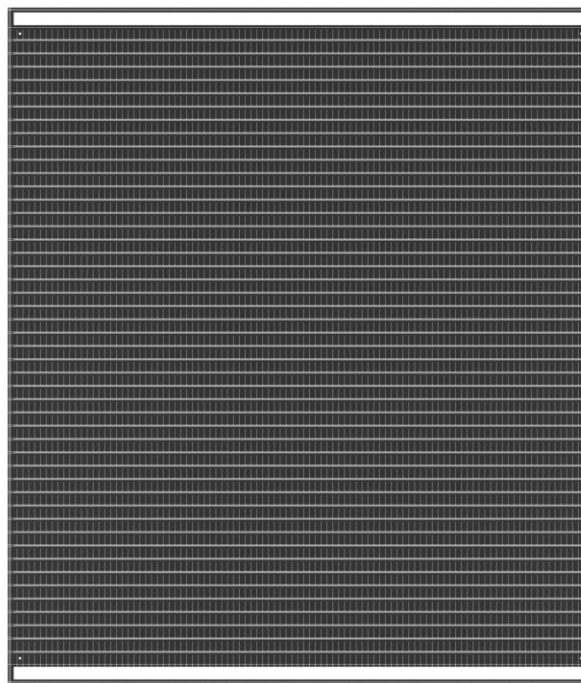
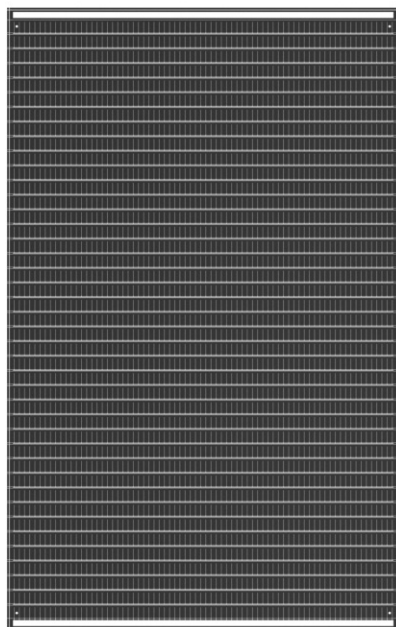
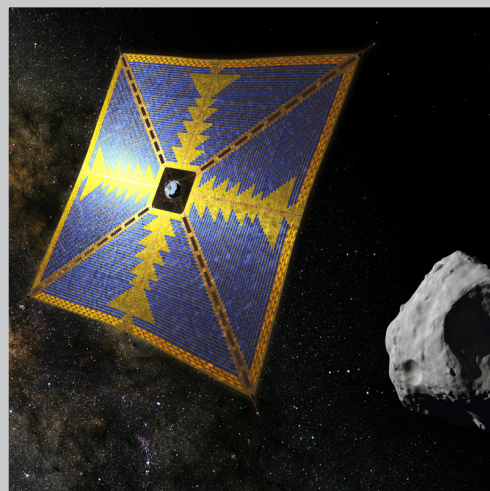
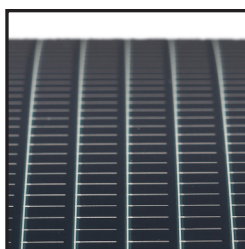
**Ascent Solar Technologies Inc.  
Solar Bare Modules - Large-Scale  
B-110-950-220**

Also available on the web at  
[EnergyPal.com/ascent-solar-technologies-inc-solar-panels/b-110-950-220](http://EnergyPal.com/ascent-solar-technologies-inc-solar-panels/b-110-950-220)

Ascent SOLAR

# BARE MODULES LARGE-SCALE GROUP

These larger-sized modules act as building-blocks for powerful satellites, spacecraft and large UAVs. The thin and lightweight profile of the modules allows for a premium areal density and seamless integration opportunities.



Model	B-066-570-170	B-110-950-220
Dimensions	310 x 195 mm	337 x 292 mm
Aperture Area	590 cm <sup>2</sup>	970 cm <sup>2</sup>
# Cells	41	48
Mass	6.6 g	11 g
P <sub>max</sub>	5.7 Watts	9.5 Watts
V <sub>mp</sub>	17 Volts	22 Volts
I <sub>mp</sub>	0.31 Amps	0.43 Amps

All physical specifications are nominal. All electrical specifications are typical.



**DURABLE | PORTABLE | FLEXIBLE | LIGHTWEIGHT**

[www.AscentSolar.com](http://www.AscentSolar.com) +1 720-872-5000 [Sales@AscentSolar.com](mailto:Sales@AscentSolar.com)



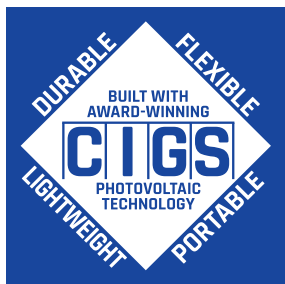
## BARE MODULE CHARACTERISTICS

Operating Temperature Range	-140°C to 125°C
Excursion Temperature Range	-196°C to 250°C (atmosphere dependent, non-oxidizing)
Storage Temperature Range	20°C to 30°C (dry and inert)
Allowable Radius of Curvature	30 mm (installation around this small radius is discouraged as the resultant shading will severely degrade the electrical performance)
Nominal Module Thickness at the Device	0.052 mm
Nominal Module Thickness at the Printed Bus	0.080 mm

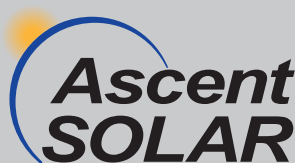
These values are representative of the bare modules only. Any coatings, applied materials or packaging may affect these values. All physical specifications are nominal. All electrical specifications are typical.

## TEMPERATURE COEFFICIENTS

Power	- 0.47%/°C
Vmp	- 0.43%/°C
Imp	- 0.06%/°C



Contact your sales representative for more details.



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Ascent Solar Technologies, Inc. is a developer of thin-film photovoltaic modules using flexible substrate materials that are more versatile and rugged than traditional solar panels. Ascent Solar modules were named as one of the top 100 technologies in both 2010 and 2015 by R&D Magazine, and one of TIME Magazine's 50 best inventions for 2011. The technology described above represents the cutting edge of flexible power and can be directly integrated into consumer products and off-grid applications, as well as other aerospace applications.

ISO 9001:2015 certified

Stock Ticker: ASTI

\*This document contains preliminary specifications. Contact Ascent Solar for most recent information. Updated Jan 17, 2018.