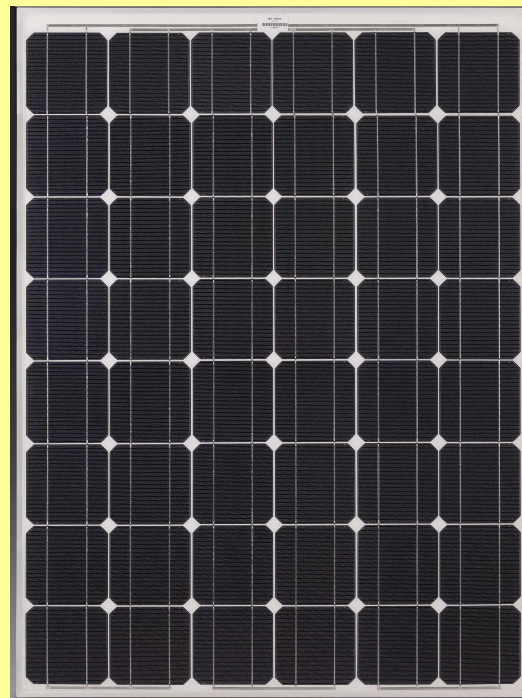


MONO CRYSTALLINE SOLAR PHOTOVOLTAIC MODULE

Andromeda Photovoltaic Modules

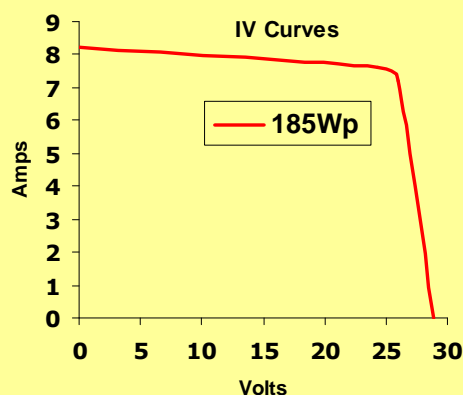
- ★ Solar cells are encapsulated between tempered & textured clear glass with low iron content resulting in efficient sunlight absorption.
- ★ EVA potant with back sheet to provide maximum protection from the severest environmental conditions.
- ★ High torsion and corrosion resistant anodized aluminum frame provides structural strength and ease of installation.
- ★ Made with 3.2 mm thick glass. We recommend 4.0 mm glass for regions prone with snowfall or custom requirement.
- ★ Supplied with individual data sheet for each module.
- ★ Supplied with both IEC certifications 61215 on performance and 61730 on safety tested at 1000 V DC.
- ★ Produced in an ISO 9001: 2000 certified production facility.
- ★ 25 year limited warranty on Power output,
 - a) Output will be still 90 % in 10 years, based on rated module performance less the negative tolerance.
 - b) Output will be still 80 % in 25 years, based on the rated module performance less the negative tolerance.



Electrical Specifications – These values are effective at (Standard Test Conditions)

MODEL	MM0180	MM0185	MM0190
Rated POWER P_{max} – [W]	180	185	190
Rated Voltage V_{max} – [V]	24.10	24.34	24.58
Open Circuit Voltage V_{oc} – [V]	28.75	28.85	29.09
Short Circuit Current I_{sc} – [A]	8.18	8.25	8.33
Tolerance	± 3%		

Module IV-Curve:



Temperature Coefficients

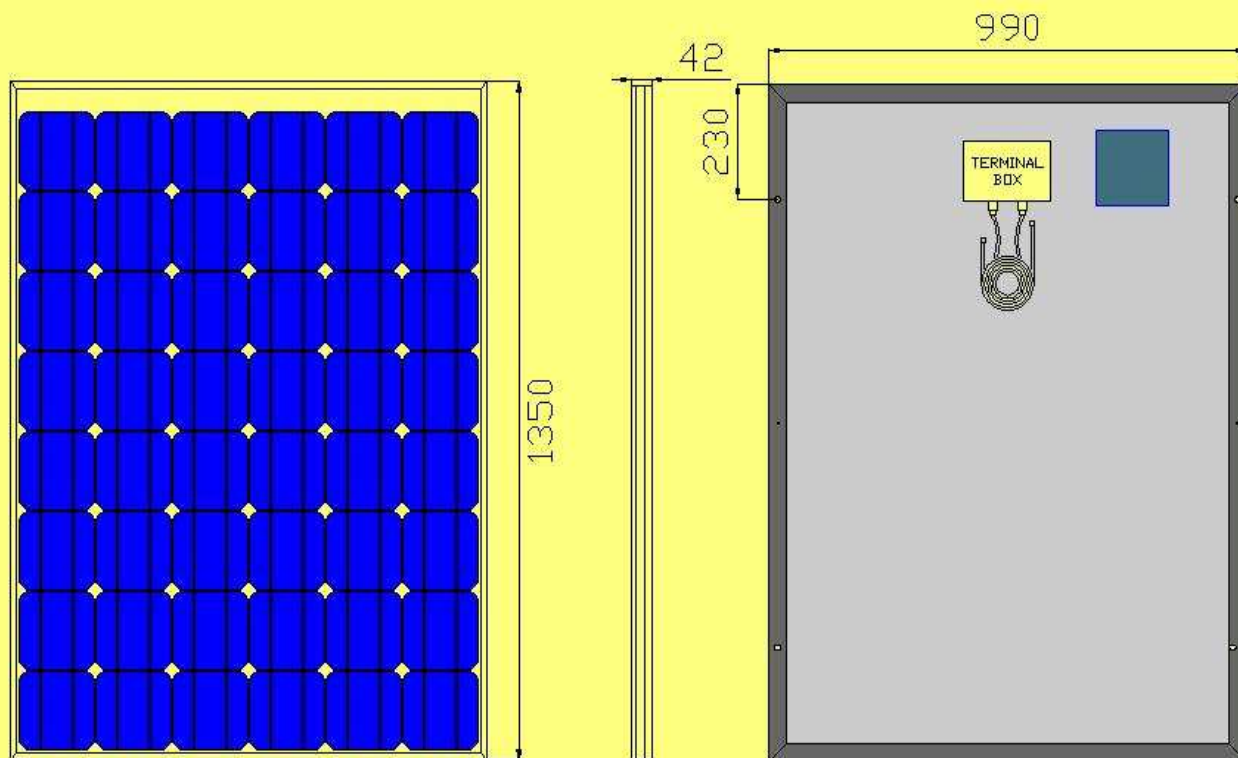
Voltage V_{oc}: -0.34%/K
Current I_{sc}: +0.03%/K
Power P_{max}: -0.48%/K

The product design is tested and certified to withstand 1000 V DC

Certifications



Module Drawing & Mounting details:



ALL DIMENSIONS ARE IN mm

Mechanical Specifications

Length [mm]	1350 ± 1
Width [mm]	990 ± 1
Thickness [mm]	42
Weight [Kg]	15.1(@3.2 mm thick glass)
No. of Solar cells	48 monocrystalline solar cells of size 156×156 mm
Certifications	IEC 61215 & IEC 61730 are due to issue in Nov'08

Other Characteristics

Front Glass	Toughened Clear Glass
Glass thickness	3mm & 4mm for snow loading regions
Cell Encapsulation	EVA (Ethylene Vinyl Acetate)
Back	A IEC/TÜV/CE certified product
Frame	Anodized Aluminum frame
Junction Box	A IEC/TÜV/CE certified product

Due to continuous product improvement activities the specifications in this product information sheet are subjected to revision, without notice. Please visit our website for updated/latest product specifications.

ANDROMEDA ENERGY TECHNOLOGIES (P) LTD.

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