



**MILLENNIUM ELECTRIC MSS PVT 240-390 MODULE DATA SHEET**

**> High Performance**

High-power module using 60 high efficient 156\*156 mm Poly or Mono-crystalline silicon cells.

**>High Quality**

**High Quality** Advanced EVA encapsulation.

**> CELL EFFICIENCY 19%**

**19%** cell conversion efficiency. PVT modules with 3 bypass diodes minimize the power drop caused by shade.

**> The Most Efficient Solar Collector in the World**

-Up to **30% higher PV efficiency** for production of electricity.

-Up to **70% additional thermal energy** from the same collector.

**> Warranty**

**Warranty** for module 90% performance after 12 years. for module 80% performance after 25 years.

*Millennium's Photovoltaic-Thermal modules offer industry-leading performance, durability, and reliability for a variety of electrical power requirements. Using breakthrough technology, these modules use high efficiency cells and contacts to reduce reflection of sunlight, a structure to improve conversion efficiency and anti-reflective coating provides uniformity.*

**MSS, Millennium's Unique Technology:**

The Multi Solar system is an innovative, patented Solar PV/Thermal System that makes it possible to **convert solar energy into Electrical energy (PV) and Thermal energy at the same time using a single integrated flat plate collector system**. The Multi Solar System uses air and water pipes to cool the PV cells in order to increase the relative efficiency of the electric system and at the same time produce hot water and hot air which can be channelled for further thermal use.

The **PV cells which are cooled by the water and air flow inside the pipes** can provide up to **30% higher annual electrical production than the usual PV system under the same conditions**. The MSS collector creates this advantage by preventing the efficiency degradation of regular PV caused by excessive heat (negative heat coefficient of half percent per degree of heat in any normal photovoltaic panel). The thermal efficiency of the MSS collector system reaches up to 70%. With the additional 15% efficiency of the PV electrical production the MSS reaches to 85% efficiency: **The Most Efficient Solar Collector in the World**.

**Common applications include:**

- Solar MSS power stations
- Solar MSS Co-generation power stations
- Grid connected houses
- Solar Air conditioning systems



**Millennium Electric Grid Connected MSS-PVT Power stations largest in the world from it kind**

**Millennium Electric Panels in a PV Power stations in Italy Germany,Spain,Korea China,Israel**

**< MILLENNIUM ELECTRIC T.O.U. Ltd >**

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# MILLENNIUM ELECTRIC

# SPECIFICATIONS

## 6" (156 x 156 mm) MSS PVT Poly-crystalline silicon Standard PV Module

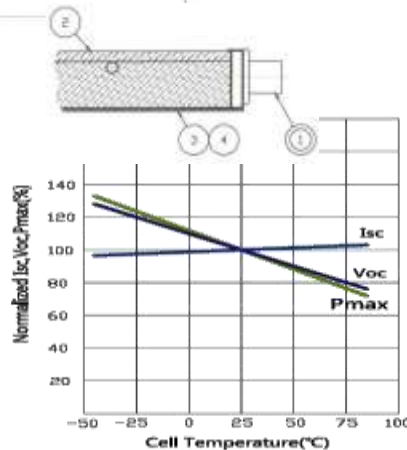
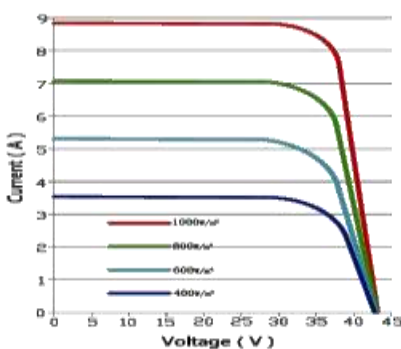
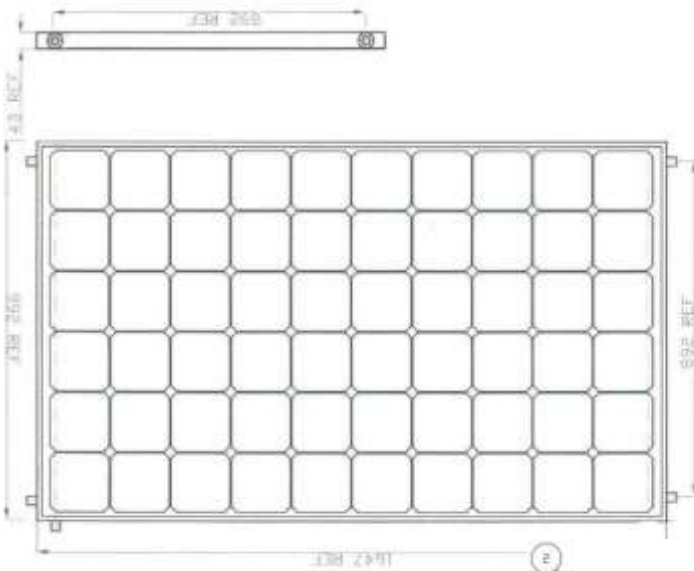
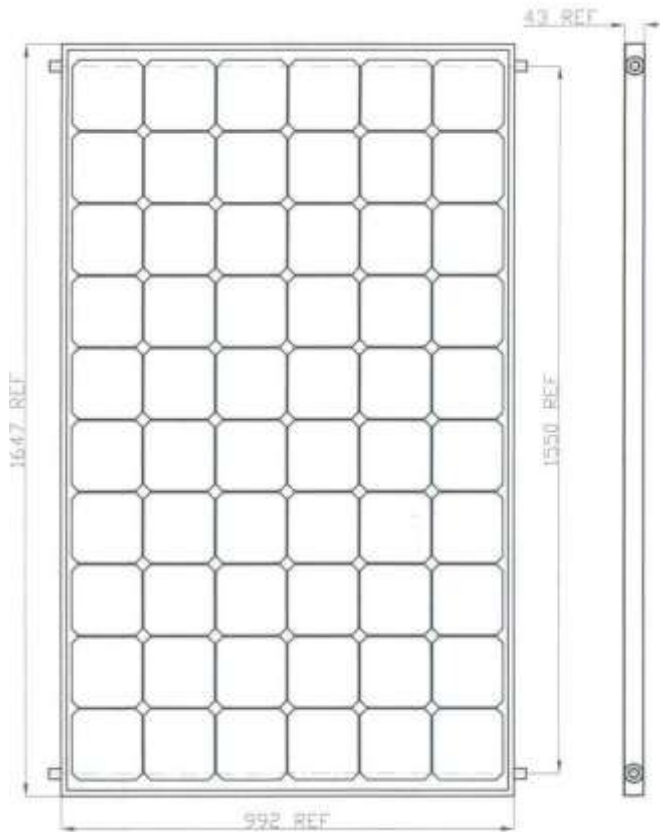
<b>Pmax +3%</b>	<b>240Wp</b>	<b>250Wp</b>	<b>260Wp</b>	<b>280Wp</b>	<b>320Wp</b>	<b>340Wp</b>	<b>350Wp</b>	<b>360Wp</b>	<b>390Wp</b>
<b>Maximum Power Voltage Vmp(V)</b>	34.4	34.7	35.0	35.2	38.7	39.4	40.7	40.9	41.2
<b>Maximum Power Current -Imp (A)</b>	6.98	7.20	7.43	7.67	7.89	8.98	9.20	9.43	9.67
<b>Open Circuit Voltage -Voc (V)</b>	43.2	43.5	43.9	44.2	47.5	48.2	48.5	48.9	49.2
<b>Short Circuit Current -Isc(A)</b>	7.89	8.11	8.30	8.59	8.81	9.19	9.31	9.45	9.59
<b>Cell max Eff. (19.55%)</b>	16.55	16.90	18.25	19.05	19.25	19.35	19.50	19.75	19.9
<b>Module max Eff. (19.41%)</b>	16.37	16.88	17.40	17.92	18.41	18.57	18.88	19.04	19.22
<b>NOCT</b>	48+-2°C								
<b>Operating Temperature</b>	-40 °C ~85 °C								
<b>Max system Voltage</b>	1000V (IEC) DC								
<b>Maximum rated current series</b>	15A								
<b>Weight</b>	19-26 kgs (50.7 lbs)								
<b>L x W x H ( mm )</b>	1956 x 992 x 50 mm (Cable 900mm)								
<b>Front Glass</b>	3.2 mm, High Transmission, Low Iron, Tampered glass								
<b>Number of Cells</b>	Poly 60 of 156mm Mono 76 in a 6 x 12								
>> Temperature Co eff. of Voc: -0.40 % / ° C >>Temperature Co eff. of Isc: +0.05 % / ° C >>Temperature Co eff. of Pmax: -0.46 % / ° C; Number Of Diodes-3;									

Current, Power Vs. Voltage Characteristics



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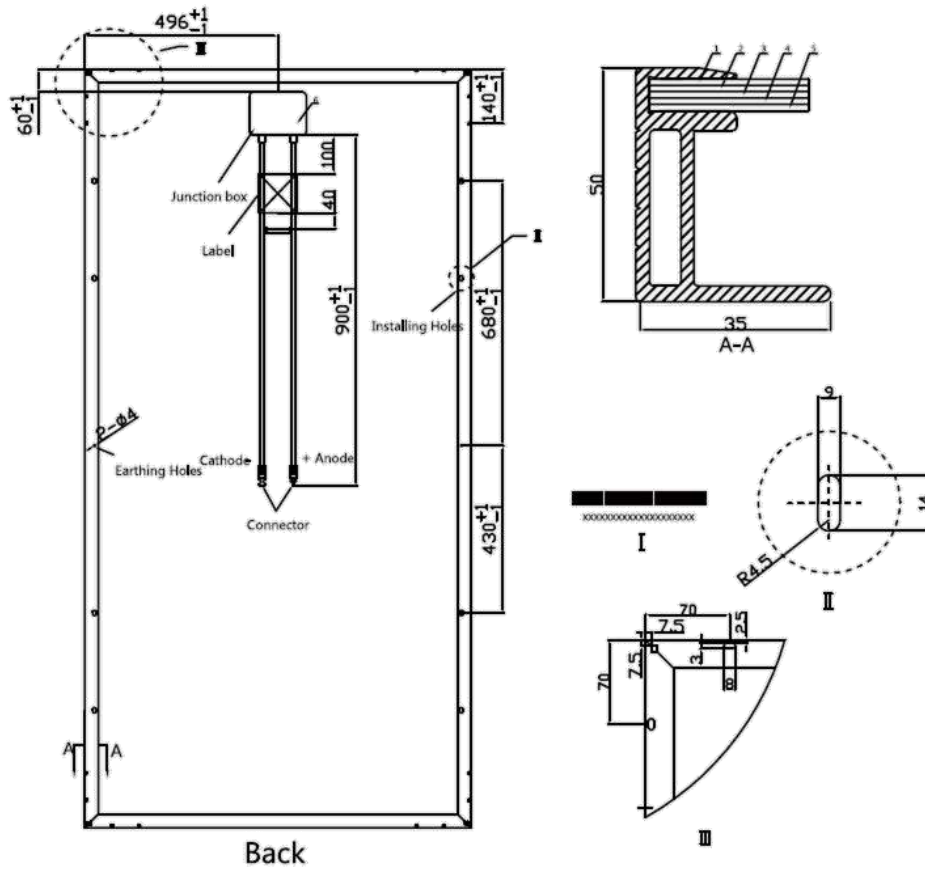
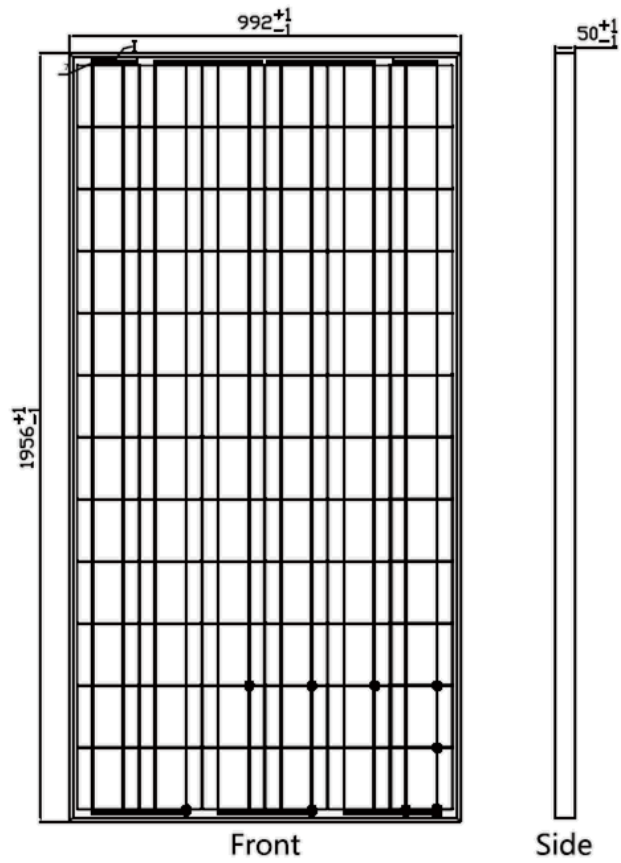
# MSS MIL-PVT 250W-MO2



## COMPONENT DESCRIPTION

Type	MSS-MIL-PVT-250W-390W-M02
Rated Power	250W-390W
Power tolerance	+3%
Output Power	250-390W electric & 1000-3000W thermal
Cell type	High Efficient poly-crystalline
Cell shape	Square 156*156 mm
Module Average Efficiency-exchange power	17.27% electricity 60% thermal
Cell Efficiency	19%
Cells per Module	6*10
Quality guarantee	<b>Warranty</b> for module 90% performance after 15 years. for module 80% performance after 30 years.
Distribution	Worldwide
Length	1647 mm
Width	992 mm
Thickness	45 mm
Frame type	Anodized Aluminum Alloy
Connection type	MC900 mm
Weight	26 kg
Voc	37.6-40
V Isc	8.7-10 A
Maximum Power Voltage	40.6 V
Maximum Power Current	10.17A
Coefficient of voltage	-0.34%/°C
Coefficient of current	0.03%/°C
Coefficient of power	-0.37%/°C
Glass, Type and thickness	High Transmits, Low Iron, Tempered Glass 3.2 mm
Max Series Fuse	15A
Max System Voltage	DC 1000 V
Test conditions	1000W/m2, AM1.5, 25°C
Thermal property Spec. & Production	5000 Kcal/Day Max pressure 12br Max tem. 110 C Collector Material copper tube/ coil

# Outline Dimensions



STC: irradiance level 1000W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature 25oC  
 Specifications and design are subject to change without further notice.  
**Tolerance +3% Power Warranty (90% /15 Y 80% / 35 Y)**  
**product workmanship warranty (20 YEARS)**