

# Matrix Module

## 50W Poly

MA-SW050P

High Performance  
Solar Modules



### Electrical Characteristics

	MA-SW045P	MA-SW050P	MA-SW055P	Unit
Rated Power at STC (Pmp)	45	50	55	W
Power Tolerance	(0,+4.99)	(0,+4.99)	(0,+4.99)	W
Power Maximum at STC	49.99	54.99	59.99	W
Cell Efficiency ( $\eta_c$ )	14.2-16.6	16.6-17.4	17.4-18.9	%
Minimum Module Efficiency ( $\eta_m$ )	11.10	12.30	13.60	%
Open Circuit Voltage (Voc)	21.60	21.60	21.60	V
Short Circuit Current (Isc)	2.84	3.16	3.48	A
Maximum Power Voltage (Vmp)	17.40	17.40	17.40	V
Maximum Power Current (Imp)	2.58	2.87	3.16	A
Maximum System Voltage	600 (UL)			V
Maximum Series Fuse Rating	6			A

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25°C, AM=1.5;  
Power measurement tolerance: +/-3%

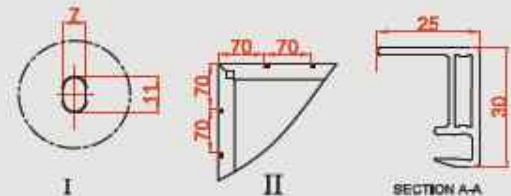
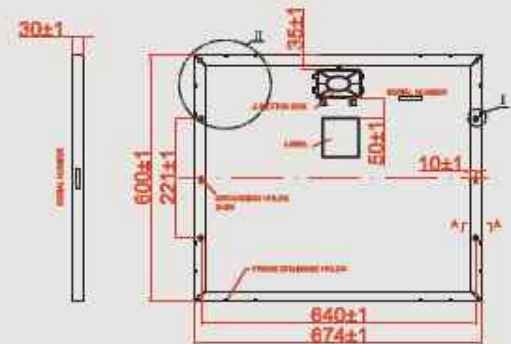
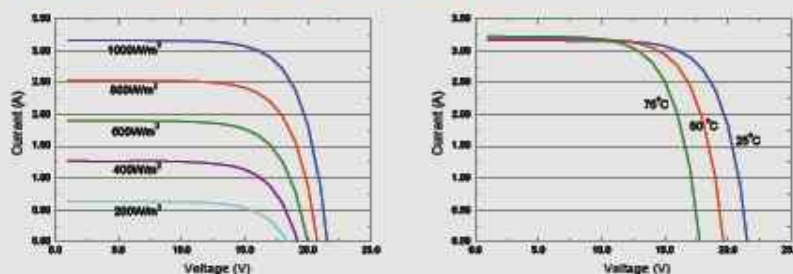
### Temperature Characteristics

Pmax Temperature Coefficient	-0.45 %/°C
Voc Temperature Coefficient	-0.30 %/°C
Isc Temperature Coefficient	+0.08 %/°C
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

### Packing Configuration

Container	20'GP	40'GP	40'HC
Pieces per container	812	1740	NA

### Current-Voltage & Power-Voltage Curve (SRP-50PB)



\* All Dimensions in mm

\* The above drawing is a graphical representation of the product.  
For engineering quality drawings please contact SERAPHIM.

### Mechanical Specifications

External Dimensions	600 x 674 x 30 mm
Weight	5.0 kg
Solar Cells	Polycrystalline 58 x 156mm(36pcs)
Front glass	3.2 mm tempered glass, low iron
Frame	Anodized/ Electrochromic aluminum alloy
Junction Box	IP65/IP67
Output Cables	4.0 mm <sup>2</sup> , symmetrical lengths 900mm
Connector	MC4 Compatible
Maximum Snow Load	550kg/m <sup>2</sup>
Maximum Wind Load	200km/h
Hailstone Impact Test	80km/h for 25mm ice ball

## WARRANTY

- ✓ Positive tolerance guarantee for each panel
- ✓ 10 years guarantee on product material
- ✓ 12 years guarantee on 90% minimum output
- ✓ 25 years guarantee on 80% minimum output
- ✓ Product liability insurance with CHUBB Group
- ✓ Product performance (E&O) insurance CHUBB Group

**10 years**  
guarantee on  
product material

**12 years**  
**90%**

12 years guarantee on  
90% minimum output

**25 years**  
**80%**

25 years guarantee on  
80% minimum output



**Photon**  
LABORATORY



## BEFORE & AFTER SERVICE

Before & After Service: Service is a continuation of sales progress. Seraphim is a professional provider of solar energy solutions, making progress in R&D, production, sales & after sales and striving to provide qualified products as well as professional service from enquiry to after sales:

- ✓ Regular sampling test by Photon Testing Laboratory to proven product performance and reliability
- ✓ Skilled engineers for technology consultation
- ✓ Tailored solution proposal design and project conduction
- ✓ Advanced ERP system allows customers to view the whole production procedure
- ✓ Local office for most efficiency support and online service system for customers

**SHIFT FOR THE BETTER™**