

# SUN MATE

SM-Mp Series Monocrystalline (Perc Cell) PV Modules 385W - 405W

Over **22,2** Cell Efficiency



**Sonetrol**<sup>®</sup>  
Solar Energy Systems

**72 CELL**  
MONOCRYSTALLINE MODULE

**385W - 405W**  
OUTPUT POWER RANGE

**OVER 20**  
PANEL EFFICIENCY

**0~+5Wp**  
POSITIVE OUTPUT TOLERANCE



**Positive Output Tolerance**



**Over 20 Panel Efficiency**



**Compatible with International Standards**



**100% Double EL Control**



**1500V Maximum System Voltage**



**High Quality Junction Box and Plugging System**



**5400 Pa Snow Load  
2400 Pa Wind Load Resistance**



**Type 1, Type 2  
A Class Fire Protection**



**10 Years Producer Warranty**



**25 Years Linear Performance Warranty**

**SONETROL ENERGY**; activity in the sector since 2016 by closely following innovative and innovative developments, is a company that offers innovative quality product solutions to the market. Common interest with our employees, stakeholders and customers by acting in line with the renewable energy sector we serve you to contribute.

**SONETROL ENERGY**; presented to you, our valued customer 10 years product durability for models, 10 years 90% efficiency and 25 years It guarantees 80% linear efficiency.

## QUALITY SYSTEMS AND CERTIFICATION

IEC61215: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules- Design Qualification and Type Approval  
IEC61730: Photovoltaic Module Safety Qualification - Requirements for Construction  
ISO 9001: Quality management system  
ISO 14001: Environmental Management System Certificate  
OHSAS 18001: Occupational Health and Safety Management System



## LINEAR PERFORMANCE WARRANTY

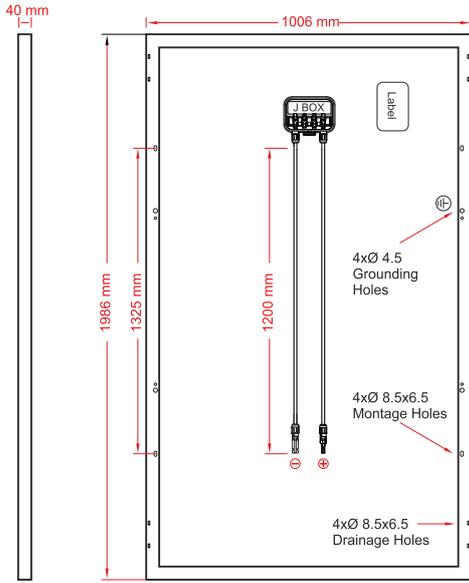


The data were measured under standard test conditions. It may vary depending on the ambient conditions.

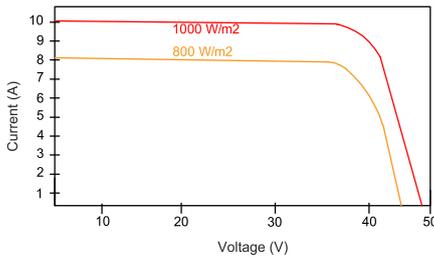
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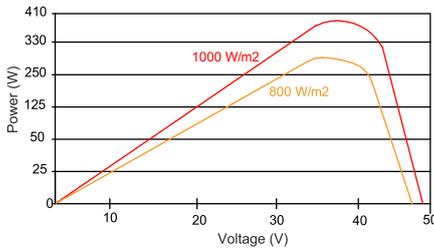
## MODULE DIMENSIONS (mm)



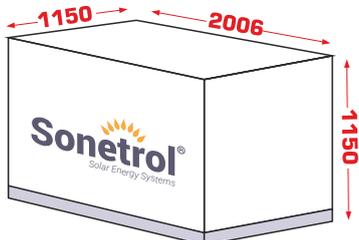
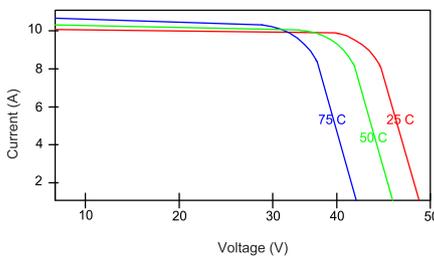
## CURRENT VOLTAGE CURVE



## POWER VOLTAGE CURVE



## CURRENT VOLTAGE CURVE



## ELECTRICAL PARAMETERS (STC)

	Unit	OSMp72-385W	OSMp72-390W	OSMp72-395W	OSMp72-400W	OSMp72-405W
Maximum Power	Pmaks (Wp)	385	390	395	400	405
0 ~ +5W						
Max. Power Voltage	Vmpp (V)	40,8	41,1	40,48	40,51	41,1
Max. Power Current	Impp (A)	9,44	9,49	9,76	9,9	9,87
Open Circuit Voltage	Voc (V)	49,1	49,3	49,64	49,95	49,3
Short Circuit Voltage	Isc (A)	9,92	10,12	10,27	10,30	10,49
Module Efficiency	$\eta_m$ (%)	19,27	19,52	19,77	20,07	20,2

STC: 1000W/m<sup>2</sup> Irradiation / 25°C Cell Temperature / AM=1,5 / Measurement Accuracy ±%3 / 1m/s Wind Speed

## ELECTRICAL PARAMETERS (NOTC)

	Unit	OSMp72-385W	OSMp72-390W	OSMp72-395W	OSMp72-400W	OSMp72-405W
Maximum Power	Pmaks (Wp)	291	295	300	306	308
Max. Power Voltage	Vmpp (V)	38,9	39,1	39,5	39,9	38,9
Max. Power Current	Impp (A)	7,49	7,55	7,61	7,67	7,92
Open Circuit Voltage	Voc (V)	47,8	48,1	48,6	49	46
Short Circuit Voltage	Isc (A)	7,95	8,01	8,07	8,1	8,44

NOTC: 800W/m<sup>2</sup> Irradiation / 20°C Cell Temperature / AM=1,5 / Measurement Accuracy ±%3 / 1m/s Wind Speed

## MECHANICAL COMPONENTS

Cell Type	Monocrystalline Perc Cell / 156.75 mm x 156.75 mm
Cell Amount	72 Cell (6x12)
Panel Size	1006 x 1986 x 40 mm
Weight	22,5 Kg
Glass	3.2 mm (0,125")Low Ironed High-Pass Tempered Glass
Back Surface	Multi Layered White Polymer Film
Frame	White Anodized Aluminium
Junction Box	IP 67 or IP 68 - 1500 VDC / 15A
Output Cables	IEC, UL approved (4 mm <sup>2</sup> , 12 AWG) (PV Cable Type) , 1200mm
Connector	Compatible MC4 (IP67, IEC and UL approved)
Fire Resistance	Type 1, Type 2 - A Class
Impact Resistance	Decreased from *51,19 / 1300 mm, (1.18 lbs / 535g) Steel Ball Test

## TEMPERATURE COEFFICIENTS

NOTC (Nominal Cell Working Temperature)	45°C (± 2°C)
Temperature Coefficient (Pmax)	-0,40 %/°C
Temperature Coefficient (Voc)	-0,3409 %/°C
Temperature Coefficient (Isc)	+0,0447 %/°C

## WORKING CONDITIONS

Working Temperature	-40~+85°C
Max. System Voltage	1500V DC (UL / IEC)
Max. Reverse Current	15A / 20A
Maximum Load	75 lbs ft (UL Standard) 5400 Pa (IEC Standard)

## PACKAGING

Pallet Size:	1150x2006x1150 mm
Modules per Pallet:	28 Pieces
Total Weight:	660 Kg
Modules per 40 HC Container:	720 Pieces
Modules per 20 DC Container:	300 Pieces

## WARRANTY

10 Years	Mechanical Warranty
25 Years Linear Performance Warranty	

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