

Monocrystalline PV module 72 cells

(Black series)

Electrical Characteristics

Model	UP-M160M	UP-M165M	UP-M170M	UP-M175M	UP-M180M
Max Power Pm (W)	160	165	170	175	180
Max-Power Voltage Vm (V)	35.3	35.6	35.8	36.0	36.2
Max-Power Current Im (A)	4.53	4.65	4.76	4.86	4.97
Open-Circuit Voltage Voc (V)	44.0	44.3	44.4	44.6	44.8
Short-Circuit Current Isc (A)	4.90	4.98	5.05	5.15	5.22
Cell Efficiency	15.5%	16.0%	16.5%	16.9%	17.4%
Module Efficiency	12.5%	12.9%	13.3%	13.7%	14.1%
Maximum System Voltage (V)	1000(TUV)/600(UL)				
Power Tolerance	±3%				

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass, 3.2mm - Saint Gobain (Albarino) // CSG
Junction Box	Huber+Suhner (IP 67) Radox RH3 // Tyco , 1740971-1
Bypass Diode	3 diodes - ST STPS145 // Diotec SL1515 (15A)
Output Cables	Cable Tyco 1m, ZHSCG (4mm ² and 12AWG), IEC and UL approved
Connectors	MC4 // Tyco , IP67, IEC and UL approved
Frame	Anodized aluminum alloy type 6063-T5
Encapsulation Material	EVA (0.50 + 0.03mm thickness)
Back Foil	Black TPT (0.32+0.03mm thickness)
Silicone Sealant	Dow Corning
Temperature Range	-40°C to +90°C
Max Load	6400 Pa
Impact Resistance	Steel ball - 1040g dropped from 1m high



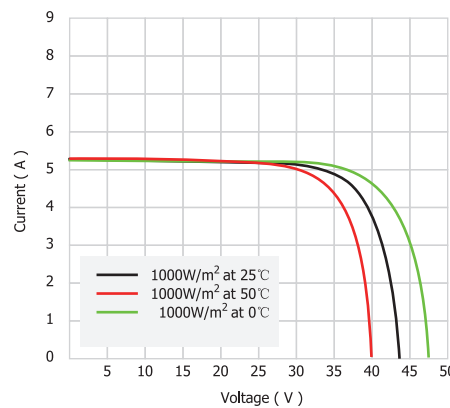
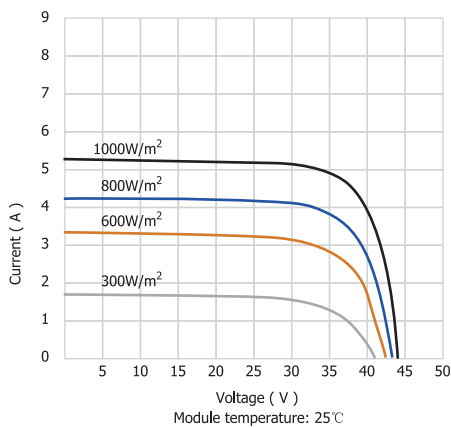
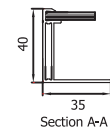
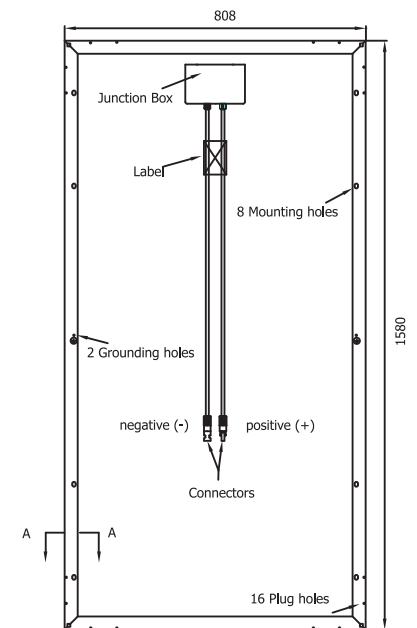


Specifications

Cells	Monocrystalline silicon solar cells 125mm x 125mm
Cells Number	72 (6x12)
Dimension(mm)	1580 x 808 x 40
Weight(kg)	15.4

Temperature Coefficients

NOCT (°C)	45±2
Current Temperature Coefficient of Isc(%/°C)	0.03±0.01
Voltage Temperature Coefficient of Voc(%/°C)	-0.34±0.01
Temperature Coefficient of Im(%/°C)	-0.05±0.01
Temperature Coefficient of Vm(%/°C)	-0.50±0.01
Temperature Coefficient of Pm(%/°C)	-0.40±0.05



Guarantee:

- 5-years product guarantee
- 10-years performance guarantee at 90% power output
- 25-years performance guarantee at 80% power output

Note:

1. STC: Irradiance 1000W/m², Module temperature 25°C, AM=1.5
2. Nominal Operating Cell Temperature above data is only for reference
3. Deviation of Vm(V), Im(A), Voc(V) and Isc(A) of ±10%

