MODULE CPM180-A-72

CALRAYS™
ENERGY SYSTEMS

Certified Quality

MCS IEC CE TÜV CERT ISO 9001:2000 VDE

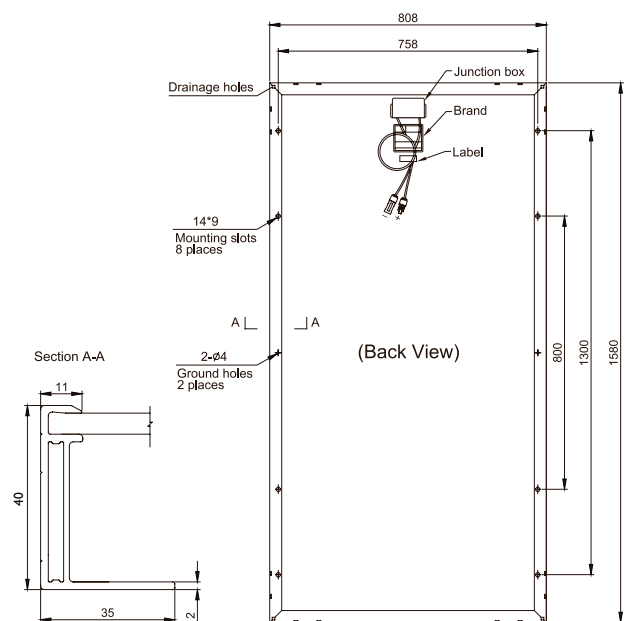## 72 pcs 125 x 125 mm monocrystalline silicon cell

The CPM180 series modules consists of 72 pcs 125×125 mm monocrystalline silicon solar cells which are in high efficiency, individually characterized and electronically matched before interconnection. Laminated with high quality toughened glass, EVA and TPT, the operating characteristics of solar cells can be ensured under any climatic conditions.
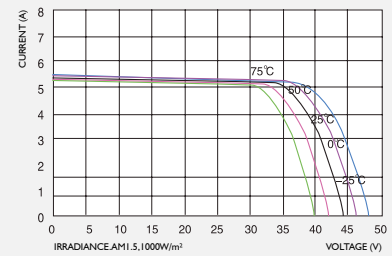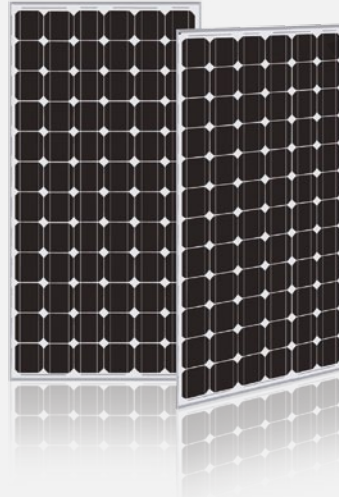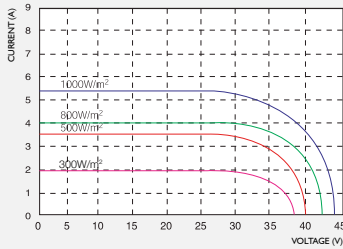
After assembled by anodized aluminum alloy frame and MC type junction box, cable with connector, the CALRAYS solar modules are designed for long service life, easy to install, withstand the storm, high wind and hail impact etc.

The Junction box is available in black or silver. The module we also offer in black.

Module Diagram (Measures in mm)

Drainage holes
Junction box
Brand
Label
14*9
Mounting slots
8 places
808
758
A | |_ A
Section A-A
2-Ø4
Ground holes
2 places
(Back View)
11
40
35
2
800
1300
1580

OUR TECHNOLOGY. YOUR ENERGY.

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SPECIFICATIONS

Cell	Monocrystalline silicon solar cells 125 mm × 125 mm
No. of cells and connections	72 (6 × 12)
Dimension of module	1580 mm × 808 mm × 40 mm

OUTPUT

Cable	4.0 mm² (TÜV)
Lengths	900 mm
Connecter	MC Type

TEMPERATURE COEFFICIENTS

NOCT		45°C ±2°C
Short-circuit current temperature coefficient	α (Isc)	0.10 % / °C
Open-circuit voltage temperature coefficient	β (Voc)	-0.38 % / °C
Peak power temperature coefficient	γ (Pmax)	-0.47 % / °C

NOCT: Nominal Operating Cell Temperature bove data is only for reference

MODUL CPM180-A-72

	190 W	195 W	200 W
Maximum Power (Pmax)	190 W	195 W	200 W
Encapsulation	Glass / EVA / Cells / EVA / TPT		
Size and Number of cells	125 mm × 125 mm 72/6 × 12 pcs		
Power Tolerance	±3 %		
Cell Efficiency	17,8	18,2	18,5
Open Circuit Voltage (Voc)	44.8 V	45.0 V	45.2 V
Short Circuit Current (Isc)	5.62 A	5.76 A	5.89 A
Maximum Power Voltage (Vmp)	36.4 V	36.6 V	36.8 V
Maximum Power Current (Imp)	5.20 A	5.33 A	5.44 A
Max. syst. Oper. voltage	1000 V		
Diodes	6 by-pass		
Dimension	1580 × 808 × 40 mm		
Weight	15 kg		
Operate Temp. scope	-40	+85 °C		
Relative humidity	0 to 100 %		
Resistances	227g steel ball fall down from 1m height and 60m/s wind		
Warranty	Pm is not less than 90% in 10 years and 80% in 25 years		

Test condition: @STC 1000W/m² . AM1.5, 25°C