SunshineSolar

590W

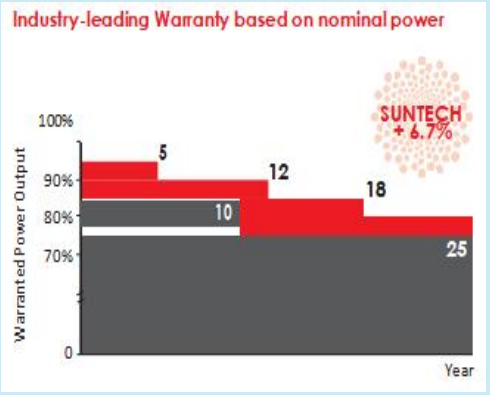
MONOCRYSTALLINE SOLAR MODULE



Trust *Sunshine Solar photoelectricity* to Deliver Reliable Performance Over Time



Reliable IP67 Rated Junction Box



Feature

Sunshine Solar current sorting process

System output maximized by reducing mismatch losses upto 2% with modules sorted & packaged by amperage

High module conversion efficiency

Module efficiency up to 22.5% achieved through advanced cell technology and manufacturing capabilities

Self-cleaning & anti-reflective

Higher module efficiency from anti-reflective, hydrophobic layer with higher light absorption and minimal surface dust

Excellent weak light performance

Excellent performance under low light conditions

Extended wind and snow load tests

5400 Pa

Module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 Pascal)

Positive tolerance

5%

Guaranteed positive tolerance of up to 5% delivers higher outputs reliably

Maximize customer benefits

Maximize the benefits of end customers

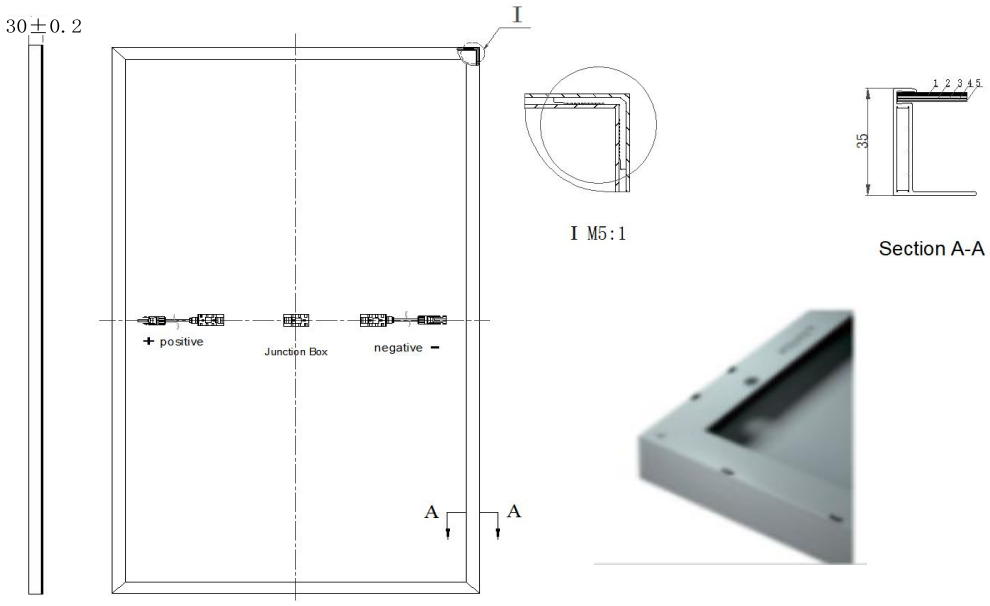
Strict quality control

Very strict quality control process and introduction of lean production mode

SunshineSolar

Engineering drawings.





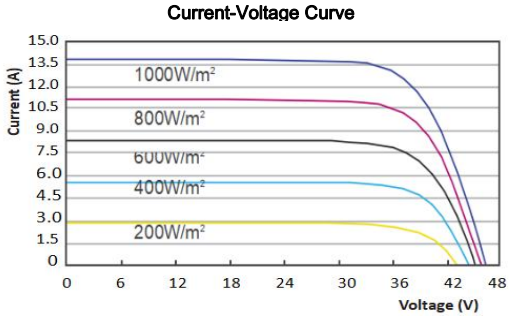
Mechanical Characteristics

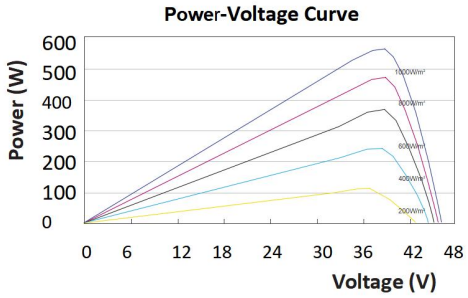
Solar Cell	Monocrystalline silicon 182× 9 1 mm
No. of Cells	144(6× 12x2)
Dimensions	2279×1134 ×30mm
Weight	26.5kg
Front Glass	3.2 mm tempered glass
Frame	Anodized aluminium alloy

Temperature Characteristics

Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient of Pmax	-0.40 %/°C
Temperature Coefficient of Voc	-0.31 %/°C
Temperature Coefficient of Isc	0.051 %/°C

I-V Curves of pv module





Electrical Characteristics

STC	590M-144
Maximum Power at STC (Pmax)	590W
Optimum Operating Voltage (Vmp)	43.4V
Optimum Operating Current (Imp)	13.59A
Open Circuit Voltage (Voc)	52.79V
Short Circuit Current (Isc)	14.5A
Module Efficiency	22.5%
Operating Module Temperature	-40 °C to +85 °C
Maximum System Voltage	1500 V DC (IEC)
Power Tolerance	0-5 %

STC: Irradiance 1000 W/m^2, module temperature 25 °C, AM=1.5;