

**Rhine Solar** module production facility of 120MW are structured for “Quality Products”. Our European engineering and manufacturing expertise and emphasis on utilizing the very latest technologies places us ahead of the competition and one of the best & most automatically advanced solar manufacturing facility in National Capital Region of Delhi with its corporate office in New Delhi founded in 2014 by MBA's & IIT (Roorkee Alumini). Rhine Solar Limited is a part of Group Companies which are successfully doing business for last 40 years into diversified business segments. Our manufacturing facilities in Sonipat Haryana use fully-automated equipment from MONDRAGON assembly (Europe), combined with meticulous quality control procedures to produce our premium photovoltaic modules.

Top quality “**Made by Rhine Solar Ltd**” - independently verified; The certificate “IEC Quality Tested” modules having high reliability, low degradation and optimized functional reliability . For our customers, this means even more security for their investment. Guaranteed quality. Tried & Tested.

All our modules undergo rigorous quality controls at every phase of production and must pass a wide range of specific tests in order to guarantee quality. We are regularly inspected by world-class auditors.

Our products must deliver what they promise - over their entire service life. Quality standards “**Made by Rhine Solar**” are based on the real conditions, our modules will be exposed to different climatic conditions. We are convinced: REAL VALUE lasts longer.



### QUALITY AND SAFETY:

- 100% EL Tested to ensure micro crack free modules
- Rigorous Quality Control in order to meet the TUV Standards.
- 25 Years Linear Power Output Warranty
- Around 30 In House Tests.

### APPLICATIONS:

- On-grid large scale utility systems
- On-grid roof top installation
- Off-grid residential Systems
- Solar Pumping Applications

### KEY FEATURES



Excellent module efficiency of up to 21.0%



Outstanding low irradiance performance of up to 96.0 %



IP68 junction box for long-term weather endurance

### CERTIFICATIONS

IEC 61215, IEC 61730-1 & 2, IEC 62804, IEC 61701, Fire Rating, ISO 9001, 14001, 45001

# RHINE SOLAR LIMITED<sup>®</sup>

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### HALF CUT MONO PERC MODULES

156 Cell Series

### POWER RANGE

600 watts

### MAXIMUM EFFICIENCY

21.20%

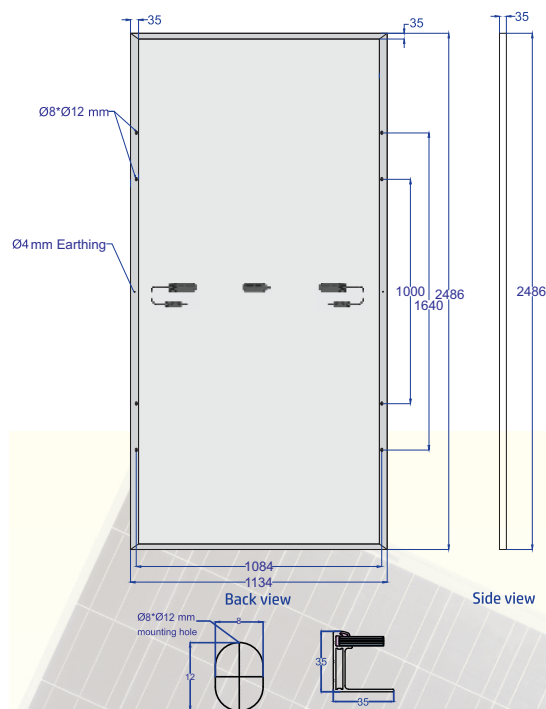
### TEMPERATURE RATINGS

Temperature Coefficient of Pmax	-0.380%/°C
Temperature Coefficient of Voc	-0.300%/°C
Temperature Coefficient of Isc	+0.060%/°C

### Linear Performance Warranty

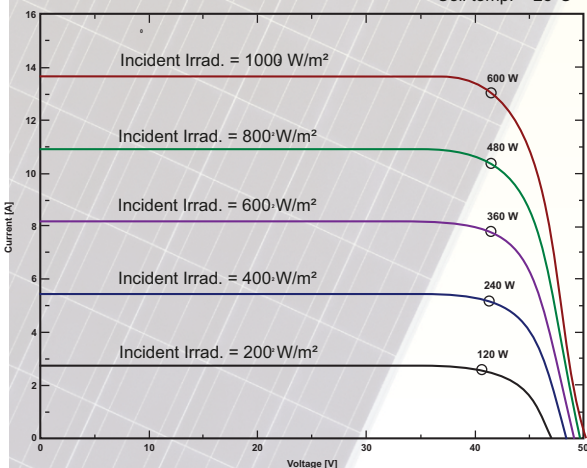
Product Warranty 10 Years: Material & Processing  
First year Degradation upto - 2%

Linear Power output 25: Annual Degradation -0.56%



Current-Voltage & Power-Voltage Curve

Cell temp. = 25°C



### ELECTRICAL DATA (at STC)

Model Type	590WP	600WP
Nominal Maximum Power (Pmax)	590 W	600 W
Short Circuit Current (Isc)	13.38 A	13.58 A
Operating Voltage (Vmp)	47.85 V	47.85 V
Operating Current (Imp)	12.34 A	12.54 A
Open Circuit Voltage (Voc)	53.84 V	53.84 V
Module Efficiency %	20.80%	21.20%
Operating Temperature	-40°C to 85°C	
Maximum System Voltage	1500 V	
Maximum Series Fuse Rating	25 Amp	
Application Classification	Class A	
Power Tolerance	+- 3%	

Under Standard Test Condition (STC) of irradiance of 1000 w/m², spectrum AM

1.5 and cell temperature of 25°C

\*Power gain from backside of panel depends on ground reflectance - bifaciality factor

### MECHANICAL DATA

Solar Cells	PERC Monocrystalline 91 mm x 182 mm
Cell Orientation	156 cells (13 x 12)
Module Orientation	2486 x 1134 x 35 mm
Weight (Kgs)	30.00 Kg
Front Glass	3.2mm toughened textured glass
Back sheet	White
Frame	Anodized Aluminum Alloy
Junction Box	IP 68 split junction box, 3 Diode
Cable & Connectors	4mm² AWG 1500V MC4 connectors
Standard Packing	25/29 Panels per pallet.
Module Pieces per Container	600 Pieces/Modules/Panels ( 40 HQ )

\*Due to continuous product innovation and improvement the specifications in product data sheet are subject to change without prior notice.

### Dealer's Stamp