




High Efficiency Solar PV Panels for Rooftop and Ground Mounted Systems

Built to maximise generation, reduce power losses

-  Our mono PERC panels deliver the highest efficiency in India* > 21.3%
-  With only positive tolerance, our panels always deliver higher than rated wattage
-  PID resistance protects from leakages and ensures longer life and reliable power generation, backed by 25 year warranty



Rooftop Solar System

Backed by best-in-class technology

-  Our manufacturing facility is vetted by PI Berlin for USA's DFC **
-  We use advanced German technology for stringing and lamination
-  Electroluminescence tested to ensure micro-crack free panels
-  Manufactured in Bengaluru



Ground Mounted Solar System



IEC Certified



ISO Certified

IS 14286 : 2010
IS/IEC 61730-1 & 2:2004



BIS Certified



ALMM Empanelled



Winner of Best C&I
Rooftop Installation -
Mercom, 2021

* At standard test conditions (STC), E = 1000 W/m², TC = 25° C, AM = 1.5

** DFC: U.S. International Development Finance Corporation



Mono PERC Modules - 72 cells - 9BB

Electrical Specifications

Rated Power Watts (STC) *	445	450	455
Module Efficiency	21.0%	21.3%	21.5%
Open Circuit Voltage - Voc (Volts)	50.90	51.00	51.10
Short Circuit Current - Isc (Amps)	11.25	11.35	11.45
Max Power Voltage - Vmp (Volts)	42.19	42.46	42.73
Max Power Current - Imp (Amps)	10.55	10.60	10.65

* Tolerance of 0 - +4

Temperature Co-efficient

Open-Circuit Voltage	-0.2588%/°C
Short-Circuit Current	0.0475%/°C
Rated Power	-0.3443%/°C
NMOT (Nominal Module Operating Temperature)	43°±2°C

Mechanical Data

Number of Cells and Dimensions	72 Cells - 166 (6.5in) x 166 (6.5in)
Dimensions in mm: LxW xH	2050mm (80.7in) x 1032mm (40.6in) x 35mm (1.4in)
Mounting Dimensions in mm: LxW	1200mm (47.2in) x 996mm (39.2in)
Weight	22.6 Kg (49.82 Lbs)
Front Glass	3.2mm (0.1in) thick, toughened anti-reflective coated glass, high transmission
Encapsulant	Ethylene Vinyl Acetate (EVA)
Back Sheet	White / Black-cell side (optional)
Frame	Anodized Aluminum Alloy Silver / Black (optional)
Junction Box	IP 67
Number of Bypass Diodes	3 Diodes
Cables	4 Sq. mm (0.2in), 1.2 Meter (47.2in) Length Cable
Connectors	MC4 Compatible

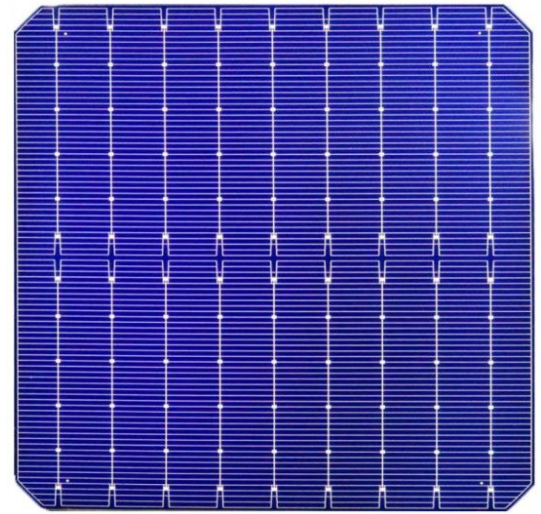
Permissible Operating Conditions

Operating Temperature Range	-40°C to 85°C
Max. System Voltage	1500V
Max. Series Fuse Rating	15A
Limiting Reverse Current	15A
Maximum Wind Load	2400 Pa
Maximum Snow Load	5400 Pa
Resistance Against Hail	Maximum 25mm (1.0in) Dia with Impact speed of 83 km/h
Application Class	Class A (Safety Class II)

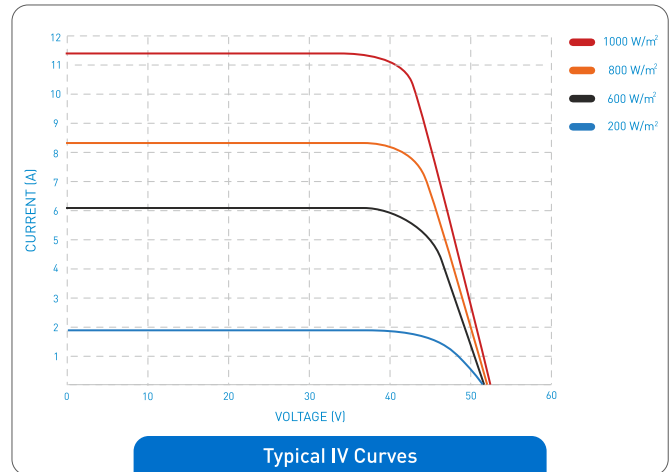
Warranty and Certificates

Product Warranty	10 years
Linear Power Warranty	Not less than 80% of the minimum peak power by end of 25th year
Certificates	IS 14286, IEC 61730-2016, IEC 61215-2016, IEC 61701, IEC 62804, IEC 62716, UL 61730

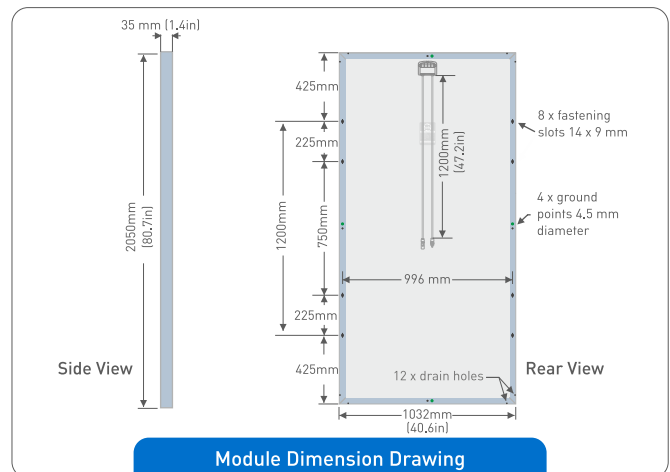
Note: 1) Rated power data at standard test conditions (STC), E = 1000 W/m², TC = 25° C, AM = 1.5
2) Specifications are subject to change without notice.



Mono Perc Solar Cell - 9 Busbar



Typical IV Curves



Module Dimension Drawing

Packaging Information

No. of panels per pallet	30 nos
No. of pallets per container (40'HC)	20 nos
Total no. of panels per container (40'HC)	600 nos

Call us toll free 1800 121 2282

Email: sales@orbenergy.com | Web: www.orbenergy.com

Orb Energy, 95 Digital Park Road, 2nd Stage, yeshawanthapura Bengaluru 560022, India