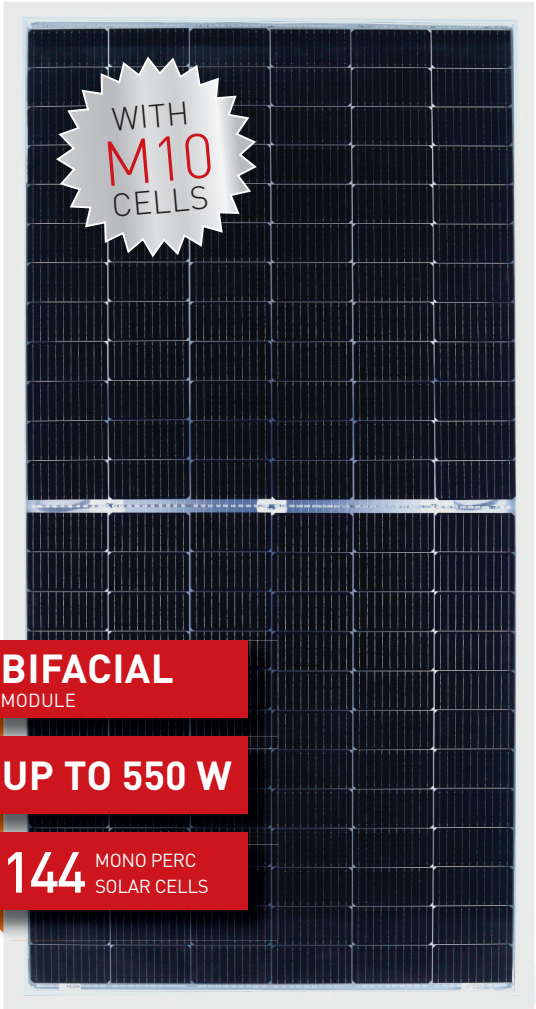
PREXOS

HIGH EFFICIENCY BI-FACIAL GLASS TO TRANSPARENT BACKSHEET PV MODULES

525-550W

MAXIMUM EFFICIENCY %	POSITIVE POWER TOLERANCE WP	CELLS	MODULE TECHNOLOGY
21.33	0~+4.99	M10 144	**HALF CUT & MICRO GAP DESIGN** WITH IMPROVED SHADE TOLERANCE



- **ANTI-STAINING PERFORMANCE** of the backsheet ensures reduced **CLEANING FREQUENCY OF REAR SIDE** of the module, leading to reduction in water usage
- **CYLINDRICAL TABBING WIRE** is used to reduce the shadow on cell active area
- **UP TO 15% POWER GAIN** from ground facing side depending upon the albedo of the ground surface
- Implementation of bypass diodes in split JB series-parallel connections enable the module to perform in **PARTIAL SHADOW CONDITIONS** with respect to full-cell module
- **HIGHER NUMBER OF BUSBAR** makes the PV modules less prone to loss in efficiency and increase tolerance to micro cracks
- **FIELD RELIABILITY** is improved due to multiple contact points on the cell which lowers the cell stress during module fabrication
- Due to **LIGHT WEIGHT** hassle-free installation of bifacial module is done with increased robustness also in east west direction
- **LCOE IS CUT BACK** by using M10 size solar cell with adding more power output than lower size cell module
- **LOWER INTERNAL RESISTANCE** boosts module power helping to achieve minimal power loss with respect to previous variant modules

PTL US CERTIFIED

FRAME	SUPERSTRATE	SUBSTRATE
SILVER	GLASS	BACKSHEET TRANSPARENT

APPLICATIONS

- On-grid large scale utility systems
- On-grid rooftop industrial and commercial systems
- Rooftop residential systems

Monocrystalline Solar PV Modules, Bifacial, MBB, M10 Half-Cell, PREXOS VSMDHT.72.AAA.05

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TECHNICAL DATA

PREXOS 525-550W

THIS DATASHEET IS APPLICABLE FOR: PREXOS VSMDHT.72.AAA.05 (AAA=525-550)

Electrical Data[1,2]

All data refers to STC (AM 1.5, 1000 W/m², 25°C)

Peak Power P_{max} (Wp)	525	530	535	540	545	550
Maximum Voltage V_{mpp} (V)	41.4	41.5	41.6	41.7	41.8	41.9
Maximum Current I_{mpp} (A)	12.69	12.78	12.87	12.95	13.04	13.13
Open Circuit Voltage V_{oc} (V)	49.2	49.3	49.4	49.5	49.6	49.7
Short Circuit Current I_{sc} (A)	13.4	13.48	13.56	13.64	13.73	13.82
Module Efficiency η(%)	20.36	20.55	20.75	20.94	21.13	21.33

1) STC:1000 W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. | 2) Power measurement uncertainty is within +/- 2%.

Electrical Parameters at NOCT[3]

Power (W)	387	393	397	399	402	407
V@P_{max} (V)	38.2	38.3	38.4	38.5	38.6	38.7
I@P_{max} (A)	10.14	10.29	10.34	10.37	10.43	10.52
V_{oc} (V)	45.7	45.9	46	46.1	46.2	46.3
I_{sc} (A)	10.83	10.89	10.96	11.03	11.09	11.15

3) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

Equivalent Bifacial Output

Bifacial Gain	Overall Power output (W)					
5%	551	557	562	567	572	578
10%	578	583	589	594	600	605
15%	604	610	615	621	627	633

Temperature Coefficients (Tc) permissible operating conditions

Tc of Open Circuit Voltage (β)	-0.27%/°C
Tc of Short Circuit Current (α)	0.050%/°C
Tc of Power (γ)	-0.35%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

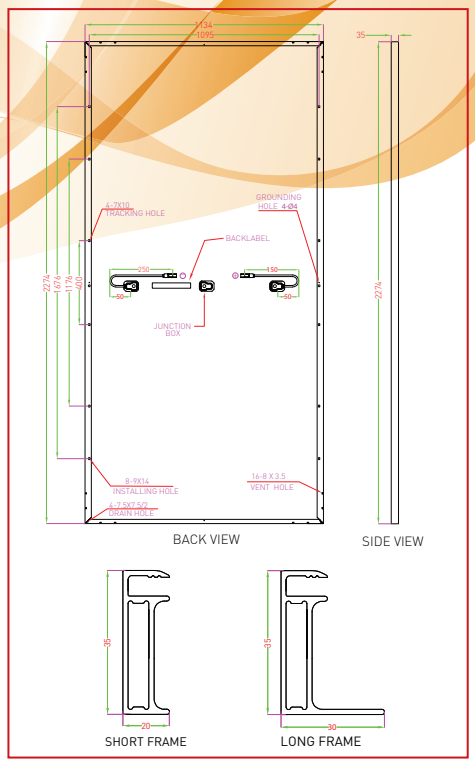
Mechanical Data

Length × Width × Height	2274 x 1134 x 35mm(89.53 x 44.65 x 1.38 inches)
Weight	28.2 Kg (62.17 lbs)
Junction Box	IP68, Split Junction Box with individual bypass diodes
Cable & Connectors#	200 mm (+ve terminal) and 300 mm (-ve terminal) length cables,MC4 Compatible/MC4 Connectors
Application Class	Class A (Safety class II)
Superstrate##	3.2 mm (0.125 inches) high transmission low iron tempered glass, AR coated
Cells	72 Mono PERC (144 half-cells) P-Type Bifacial solar cells
Back Sheet	High Transmittance Composite film with Clear Tedlar® from Dupont®
Frame	Anodized aluminium frame with twin wall profile
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Maximum Series Fuse Rating	25 A

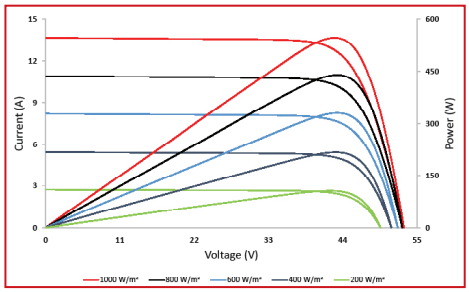
Warranty and Certifications

Product Warranty**	12 years
Performance Warranty**	Linear Power Warranty for 27 years with 2% for 1st year degradation and 0.55% from year 2 to year 27
Approvals and Certificates^	IEC 61215 : 2016, IEC 61730 : 2016, IEC 61701, IEC 62716, IEC 60068-2-68, IEC 62804, CE, CEC (California), UL 61215, UL 61730, CAN-CSA

Dimensions in mm

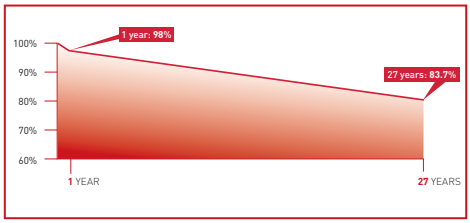


Typical I-V Curves[4]



4) Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

Performance Warranty



Packaging Information

Quantity /Pallet	31
Pallets/Container (40'HC)	20
Quantity/Container (40'HC)	620

^ All (^) certifications under progress. | ** Refer to Vikram Solar's warranty document for terms and conditions. | # 400mm(15.75 inches), 1000mm(39.37 inches),1200mm (47.24 inches) cable lengths are also available | ##Anti-glare Glass is also available

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