

PREXOS

SERIES 10

PRELIMINARY
DATASHEET

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

POWER OUTPUT WATT	MAXIMUM EFFICIENCY %	POSITIVE POWER TOLERANCE WP	CELLS (HALF CUT)
525-550	21.11	0~+4.99	M10 144



Excellent anti-staining performance of the backsheet requires significantly **LESSER CLEANING FREQUENCY OF REAR SIDE** of the module, leading to reduction in water usage



EFFECTIVE GAIN OF 1% OF CELL ACTIVE AREA by using cylindrical tabbing wire



HIGHER LIFETIME YIELD by using transparent Dupont® backsheet



UP TO 15% POWER GAIN from ground facing side



Bypass diodes and innovative series-parallel connections enable the module to perform better in **PARTIAL SHADOW CONDITIONS**



BETTER TOLERANCE TO MICRO CRACK Higher number of busbar makes the PV modules less prone to loss in efficiency due to micro-cracks.

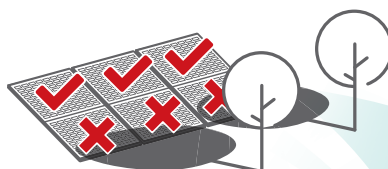


IMPROVED FIELD RELIABILITY due to multiple contact points on the cell.



LIGHT WEIGHT easy to install bifacial module with increased robustness

INCREASED SHADE TOLERANCE



HALF-CELL MODULE

Functions like two parallel modules, enabling the half-cell string to work in partial shading

APPLICATIONS

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



FRAME

SILVER

BLACK

BACKSHEET

WHITE

BLACK

TRANSPARENT

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 _{mp} (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(%)	20.15	20.35	20.54	20.73	20.92	21.11

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

Electrical Parameters at NOCT³

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)	0.065%/°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	2295 x 1135 x 35mm(90.23 x 44.68 x 1.37 inches)
Weight	28.5 Kg (62.8 lbs)
Junction Box	IP68, Split Junction Box with individual bypass diodes
Cable & Connectors [#]	400 mm 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 0.65% from year 2 to year 27
Approvals and Certificates [^]	IEC 61215 : 2016, IEC 61730 : 2016, IEC 62716, IEC 60068-2-68, IEC 62804, CE, CEC (California), UL 61215, UL 61730

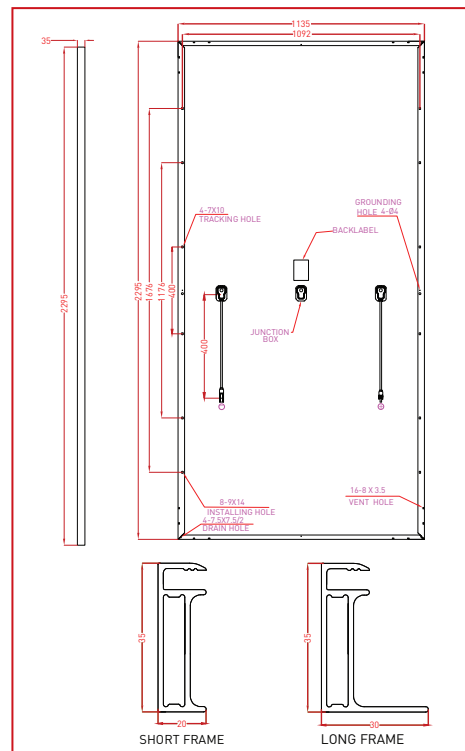
[^] All (*) certifications under progress. | ** Refer to Vikram Solar's warranty document for terms and conditions. | * 1200mm (47.24 inches) cable length is also available

CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

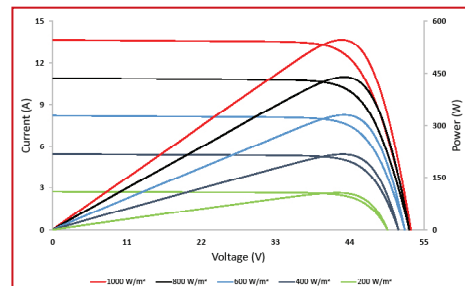
Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order.

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Dimensions in mm

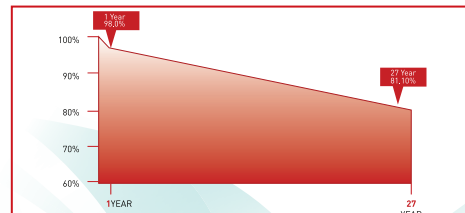


Typical I-V Curves⁴



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

Performance Warranty



Packaging Information

Quantity /Pallet	30
Pallets/Container (40'HC)	20
Quantity/Container (40'HC)	600