

PREXOS

SERIES 10

PRELIMINARY
DATASHEET

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

POWER OUTPUT WATT

525-545

MAXIMUM EFFICIENCY %

20.90

POSITIVE POWER TOLERANCE WP

0~+4.99

CELLS (HALF CUT)

M10 144



OUTSTANDING RELIABILITY with minimum exposure to corrosion from sand & salt mist with low risk of module warping & micro cracking



Bifacial gain of **UP TO 25%** with dual glass module, capable of energy generation with both direct and reflected sunlight



Additional Power yield with **30 YEARS OF PRODUCT LIFETIME** with 0.5% annual power degradation



REDUCED LCOE with **LESS BOS COST** improves value proposition of the product with competitive **ROI**



TWO PEAK PERFORMANCE TIME, during sun rise and sun set with optimum utilization of dual facial generation



EASY INSTALLATION with ability to install vertically in east west direction, better soiling resistant



Bypass diodes and innovative series-parallel connections enable the module to perform **IMPROVED SHADOW TOLERANCE**

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

GLASS

AR COATED

NORMAL

THIS DATASHEET IS APPLICABLE FOR: PREXOS VSMDH.72.AAA.05 (AAA=525-545)

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
Maximum Voltage V _{mpp} (V)	41.4	41.5	41.6	41.7	41.8
Maximum Current I _{mp} (A)	12.69	12.78	12.87	12.95	13.04
Open Circuit Voltage V _{oc} (V)	49.2	49.3	49.4	49.5	49.6
Short Circuit Current I _{sc} (A)	13.4	13.48	13.56	13.64	13.73
Module Efficiency η (%)	20.13	20.32	20.51	20.70	20.90

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
V@P _{max} (V)	38.2	38.3	38.4	38.5	38.6
I@P _{max} (A)	10.14	10.29	10.34	10.37	10.43
V _{oc} (V)	45.7	45.9	46	46.1	46.2
I _{sc} (A)	10.83	10.89	10.96	11.03	11.09
η (%)	18.6	18.9	19.1	19.2	19.3

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
10%	578	583	589	594	600
15%	604	610	615	621	627
20%	630	636	642	648	654
25%	656	663	669	675	681

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	2296 × 1136 × 35mm (90.39 × 44.72 × 1.37 inches)
Weight	37.5 Kg (82.67 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	2.0 mm (0.098 inches) high transmission low iron content, heat resistant glass, AR coated
Cells	72 Mono PERC (144 half-cells) P-Type Bifacial solar cells
Substrate	2.0 mm (0.098 inches) high transmission low iron content, heat resistant glass
Frame	Anodized aluminium frame with twin wall profile
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Cell Encapsulant	Polyolefin (POE)
Maximum Series Fuse Rating	25 A

Warranty and Certifications

Product Warranty**	12 years
Performance	Linear Power Warranty for 30 years with 2% for 1st year degradation and 0.5% from year 2 to year 30
Approvals and Certificates [^]	IEC 61215 : 2016, IEC 61730 : 2016, IEC 61701, IEC 62716, IEC 60068-2-68, IEC 61730:2016, IS/IEC 61730, IS 14286 [^] , IEC 62804, CE, CEC (California), UL 61215, UL 61730

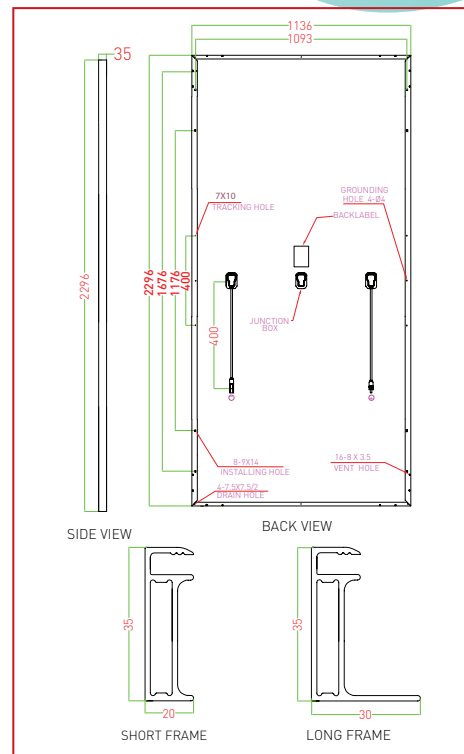
[^] All (*) certifications under progress. | ** Refer to Vikram Solar's warranty document for terms and conditions. | * 1200mm (47.24 inches) cable length is also available

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

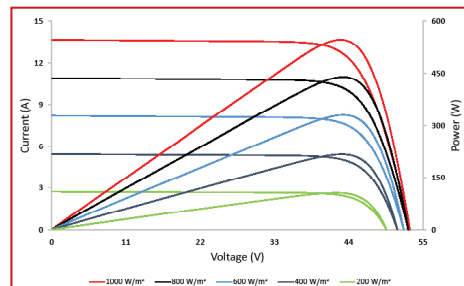
Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order.

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Dimensions in mm

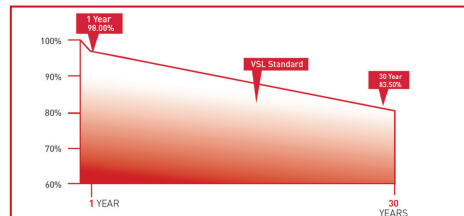


Typical I-V Curves⁴



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