

# PREXOS

## SERIES 10

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

POWER OUTPUT WATT	MAXIMUM EFFICIENCY %	POSITIVE POWER TOLERANCE WP	CELLS (HALF CUT)
525-545	21.13	0~+4.99	M10 144



**RELIABILITY IS IMPROVED** 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



**LCOE IS CUT BACK** with **LESS BOS COST** which 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



Hassle-free installation with ability to **INSTALL VERTICALLY IN EAST WEST DIRECTION**, with improved soiling resistant

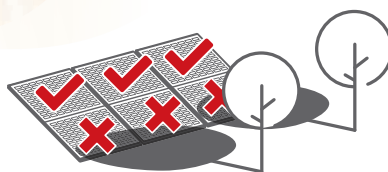


Implementation of bypass diodes in split JB series-parallel connections enable the module to perform in **PARTIAL SHADOW CONDITIONS** with respect to full-cell module



**LOWER INTERNAL RESISTANCE** boosts module power helping to achieve minimal power loss with respect to previous variant modules

### SHADE TOLERANCE



**HALF-CELL MODULE** Functions like two parallel modules, enabling the half-cell string to work in partial shading which is absent in full cell module

### APPLICATIONS

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



FRAME



GLASS



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

### Electrical Data<sup>1,2</sup> All data refers to STC (AM 1.5, 1000 W/m<sup>2</sup>, 25°C)

Peak Power P <sub>max</sub> (Wp)	525	530	535	540	545
Maximum Voltage V <sub>mpp</sub> (V)	41.4	41.5	41.6	41.7	41.8
Maximum Current I <sub>mpp</sub> (A)	12.69	12.78	12.87	12.95	13.04
Open Circuit Voltage V <sub>oc</sub> (V)	49.2	49.3	49.4	49.5	49.6
Short Circuit Current I <sub>sc</sub> (A)	13.4	13.48	13.56	13.64	13.73
Module Efficiency η(%)	20.36	20.55	20.75	20.94	21.13

1) STC:1000 W/m<sup>2</sup> irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. 1.2) Power measurement uncertainty is within +/- 2%.

### Electrical Parameters at NOCT<sup>3</sup>

Power (W)	387	393	397	399	402
V@P <sub>max</sub> (V)	38.2	38.3	38.4	38.5	38.6
I@P <sub>max</sub> (A)	10.14	10.29	10.34	10.37	10.43
V <sub>oc</sub> (V)	45.7	45.9	46	46.1	46.2
I <sub>sc</sub> (A)	10.83	10.89	10.96	11.03	11.09

3) NOCT irradiance 800 W/m<sup>2</sup>, 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	2274 × 1134 × 35mm (89.53 × 44.65 × 1.38 inches)
Weight	33.4 Kg (73.63 lbs)
Junction Box	IP68, Split Junction Box with individual bypass diodes
Cable & Connectors <sup>#</sup>	200 mm (+ve terminal) and 300 mm [-ve terminal] 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, tempered 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 strengthened 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

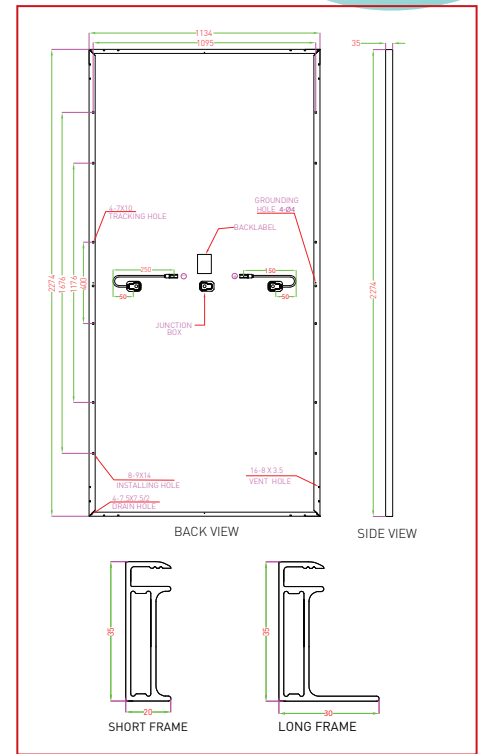
Product Warranty**	12 years
Performance	Linear Power Warranty for 30 years with 2% for 1st year degradation and 0.5% from year 2 to year 30
Approvals and Certificates <sup>^</sup>	IEC 61215 : 2016, IEC 61730 : 2016, IEC 61701, IEC 62716, IEC 60068-2-68, IEC 61730:2016, IS/IEC 61730, IS 14286, IEC 62804,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

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

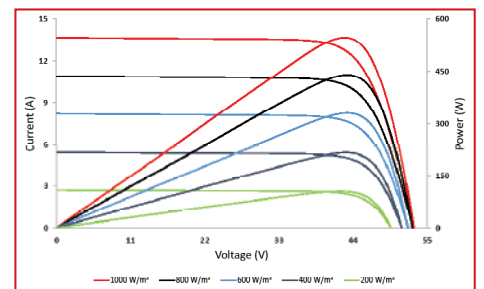
Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order.

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### Dimensions in mm

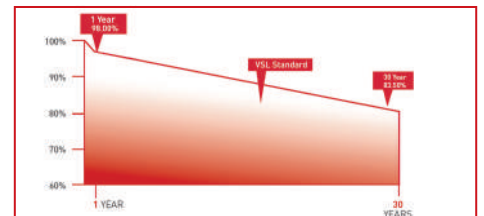


### Typical I-V Curves<sup>4</sup>



4) Average relative efficiency reduction of 5% at 200 W/m<sup>2</sup> according to EN 60904-1.

### Performance Warranty



### Packaging Information

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

<sup>^</sup> All (\*) certifications under progress. <sup>\*\*</sup> Refer to Vikram Solar's warranty document for terms and conditions. <sup>#</sup> 400mm(15.75 inches), 1000mm(39.37 inches), 1200mm (47.24 inches) cable lengths are also available