PARADEA

HIGH EFFICIENCY BI-FACIAL GLASS-GLASS PV MODULES

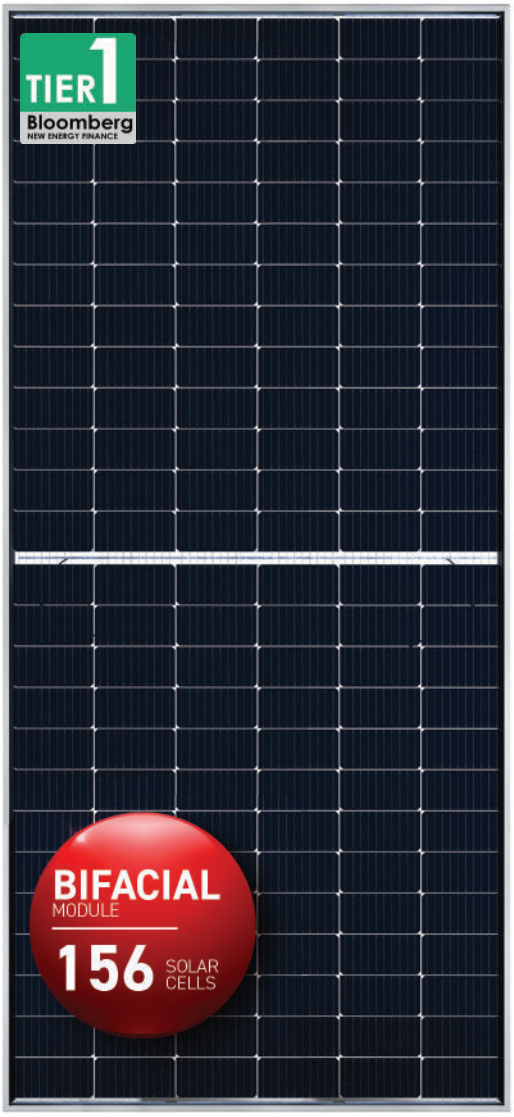
Mono PERC · N-TYPE · HJT

MODEL:
PARADEA VSMDH.78.AAA.05

585-610W

SUBSTRATE	FRAME TYPE	FRAME VARIANT
GLASS ●	ALUMINIUM ●	SILVER ●
MESH GLASS ●		BLACK ●

MAXIMUM EFFICIENCY %	CELL TYPE	PRODUCT WARRANTY	PERFORMANCE WARRANTY
22.01	M10 HALF CUT	12 YEARS	30 YEARS



PROLONGED SAFETY ASSURANCE

- IP68 with potting JB provides higher level of water ingress protection
- High insulation resistance for ensuring electrical safety

OPTIMIZED FRAME DESIGN

- Anodized aluminium frame with twin wall structure for higher strength
- Packaging capacity improved with more modules per container

RELIABILITY IS IMPROVED

- Higher corrosion resistance to severe conditions of sand dust, concentrated ammonia and salt mist
- Low risk of module warping & micro cracking

LOWER LCOE

- Lower balance of systems cost
- Improves value proposition of the product with competitive ROI

SUPERIOR HAIL TEST PERFORMANCE

- 45mm hail test passed from third party laboratory with impact velocity up to 27m/s

PRODUCT CERTIFICATES

SYSTEM CERTIFICATES

IEC 61701, IEC 62716, IEC 60068-2-68, IS/IEC 61730, CAN-CSA

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION:

- ISO 9001:2015/ Quality Management System
- ISO 14001:2015/ Environmental Management System
- ISO 45001:2018/ Occupational Health and Safety Management System
- SA 8000 :2014/ Social Accountability International

Monocrystalline Solar Pv Modules, Bifacial, Mbb, M10 Half-Cell

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CREATING CLIMATE FOR CHANGE

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CREATING CLIMATE FOR CHANGE

Mono PERC N-TYPE HJT

TECHNICAL DATA
PARADEA 585-610W

THIS DATASHEET IS APPLICABLE FOR: **PARADEA VSMDH.78.AAA.05 (AAA=585-610)**

ELECTRICAL PARAMETERS | STC[1,2]

Peak Power P_{max} (Wp)	585	590	595	600	605	610
Maximum Voltage V_{mpp} (V)	45.2	45.3	45.4	45.5	45.6	45.7
Maximum Current I_{mpp} (A)	12.96	13.05	13.14	13.23	13.32	13.41
Open Circuit Voltage V_{oc} (V)	53.6	53.7	53.8	54.0	54.1	54.2
Short Circuit Current I_{sc} (A)	13.64	13.73	13.82	13.91	13.99	14.08
Module Efficiency (%)	21.02	21.22	21.41	21.61	21.81	22.01

1)STC:1000 W/M2 IRRADIANCE, 25°C CELL TEMPERATURE, AM1.5G SPECTRUM ACCORDING TO EN 60904-3 | 2) TOLERANCE OF RATING AT STC (P_{MPP} / I_{SC} / V_{OC}) [%] : 0-3/±10/±10

ELECTRICAL PARAMETERS | NOCT[3]

Peak Power P_{max} (Wp)	436	441	445	449	454	458
Maximum Voltage V_{mpp} (V)	41.8	41.9	42	42.1	42.2	42.3
Maximum Current I_{mpp} (A)	10.44	10.51	10.58	10.65	10.72	10.79
Open Circuit Voltage V_{oc} (V)	49.9	50	50.1	50.2	50.3	50.4
Short Circuit Current I_{sc} (A)	11.03	11.1	11.17	11.24	11.31	11.38

3)NOCT IRRADIANCE 800 W/M2, AMBIENT TEMPERATURE 20°C, WIND SPEED 1 M/SEC

ELECTRICAL PARAMETERS | BNPI[4,5]

Peak Power P_{max} (Wp)	640	646	651	657	662	668
Maximum Voltage V_{mpp} (V)	45.2	45.3	45.4	45.5	45.6	45.7
Maximum Current I_{mpp} (A)	14.18	14.28	14.38	14.48	14.58	14.68
Open Circuit Voltage V_{oc} (V)	53.6	53.7	53.8	54	54.1	54.2
Short Circuit Current I_{sc} (A)	14.93	15.03	15.13	15.22	15.31	15.41

4) BNPI: 1000W/M2+ϕ.135, BIFACILITY COEFF. (ϕ) AT BNPI P_{MAX}, I_{SC} IS 70±10% & FOR V_{OC} IS 99±10% , AM 1.5, 25°C | 5) TOLERANCE OF RATING AT BNPI (P_{MPP}/ I_{SC}/ V_{OC}) [%] : 0-3/±5/±5

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

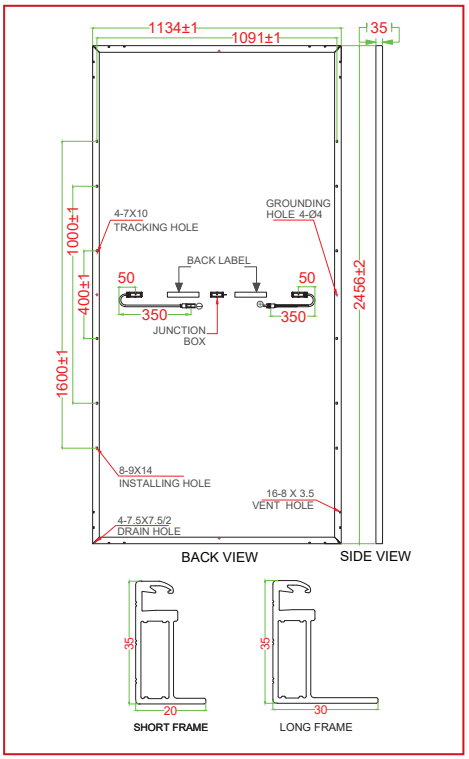
MECHANICAL DATA

Length × Width × Height	2456 × 1134 × 35mm (96.69 × 44.65 × 1.38 inches)
Weight	36.5 Kg (80.47 lbs)
Junction Box	IP68, Split Junction Box with individual bypass diodes
Cable & Connectors#	400 mm (+ve terminal) and 400 mm (-ve terminal) length cables, MC4 Compatible/Staubli EVO connectors
Application Class	Class A (Safety class II)
Superstrate##	2.0 mm (0.098 inches) High transmission ARC Semi-tempered glass (low iron content)
Cells	78 Mono PERC (156 half-cells) P-Type Bifacial solar cells
Substrate	2.0 mm (0.098 inches) High transmission Heat strengthened glass/ mesh glass#* (low iron content)
Frame	Anodized aluminium
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Cell Encapsulant	EVA/EPE
Maximum Series Fuse Rating	25 A

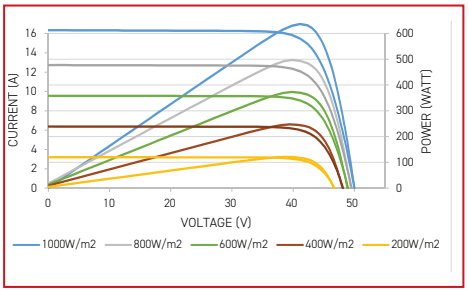
WARRANTY

Product Warranty**	12 years
Performance Warranty**	Linear Power Warranty for 30 years with 2% for 1st year degradation and 0.5% from year 2 to year 30

DIMENSIONS IN MM

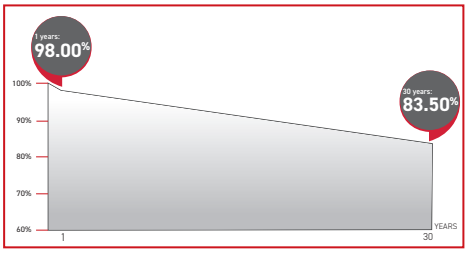


TYPICAL I-V CURVES[7]



7) 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)	16
Quantity/Container (40'HC)	496

^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 | *As per applicable product | #*With additional Cost & Lead Time subject to availability

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

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