

585-610W

SUBSTRATE
GLASS ●
MESH GLASS ●

FRAME TYPE
ALUMINIUM ●
STEEL ●

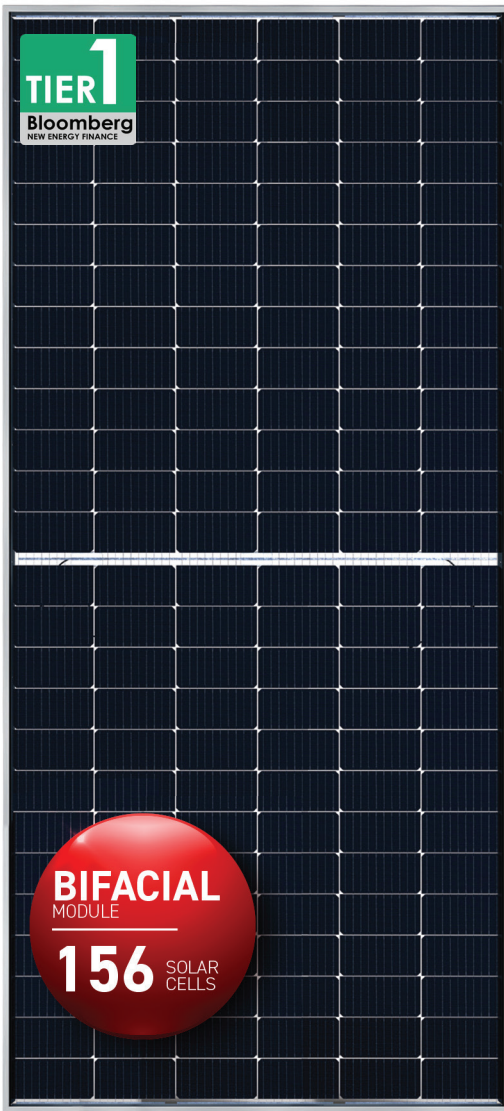
FRAME VARIANT
SILVER ●
BLACK ●

MAXIMUM EFFICIENCY %
21.90

CELL TYPE
M10 HALF CUT

PRODUCT WARRANTY
12 YEARS

PERFORMANCE WARRANTY
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

- ø 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

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

ELECTRICAL PARAMETERS | STC^{1,2}

Parameter	585	590	595	600	605	610
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 (%)	21.00	21.18	21.36	21.54	21.72	21.90

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_{max} / I_{sc} / V_{oc}) [%]: 0-3/+10/±10

ELECTRICAL PARAMETERS | NOCT³

Parameter	436	441	445	449	454	458
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}

Parameter	640	646	651	657	662	668
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+q.135, BIFACILITY COEFF. (q) AT BNPI P_{max} , I_{sc} IS 70±5% & FOR V_{oc} IS 99±10%, AM 1.5, 25°C | 5) TOLERANCE OF RATING AT BNPI (P_{max} / I_{sc} / V_{oc}) [%]: 0-3/+5/±5

TEMPERATURE COEFFICIENTS (T_c)

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

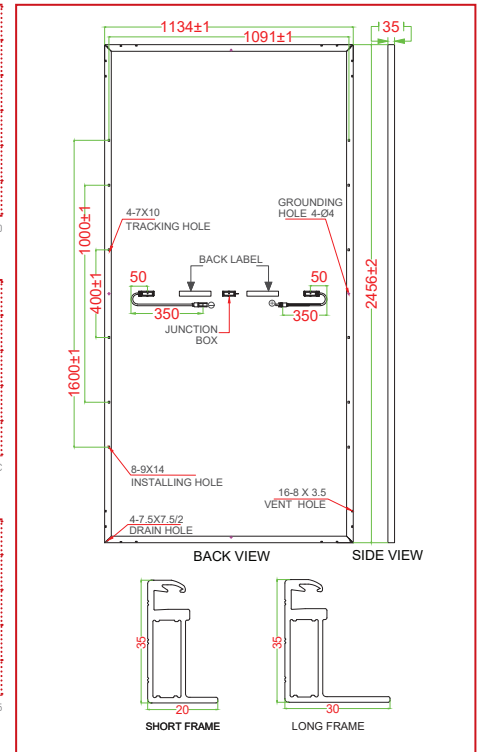
MECHANICAL DATA

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/ MC4 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

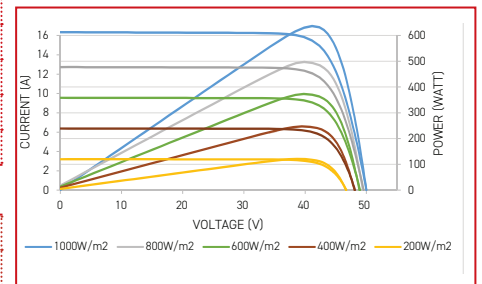
WARRANTY

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

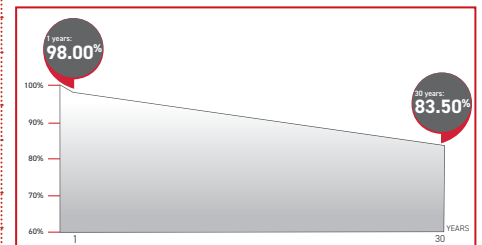


TYPICAL I-V CURVES⁷



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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