

655-680W

SUBSTRATE
GLASS ●
 MESH GLASS ●

FRAME TYPE
ALUMINIUM ●
 STEEL ●

FRAME VARIANT
SILVER ●
 BLACK ●

MAXIMUM EFFICIENCY %

21.89

CELL TYPE

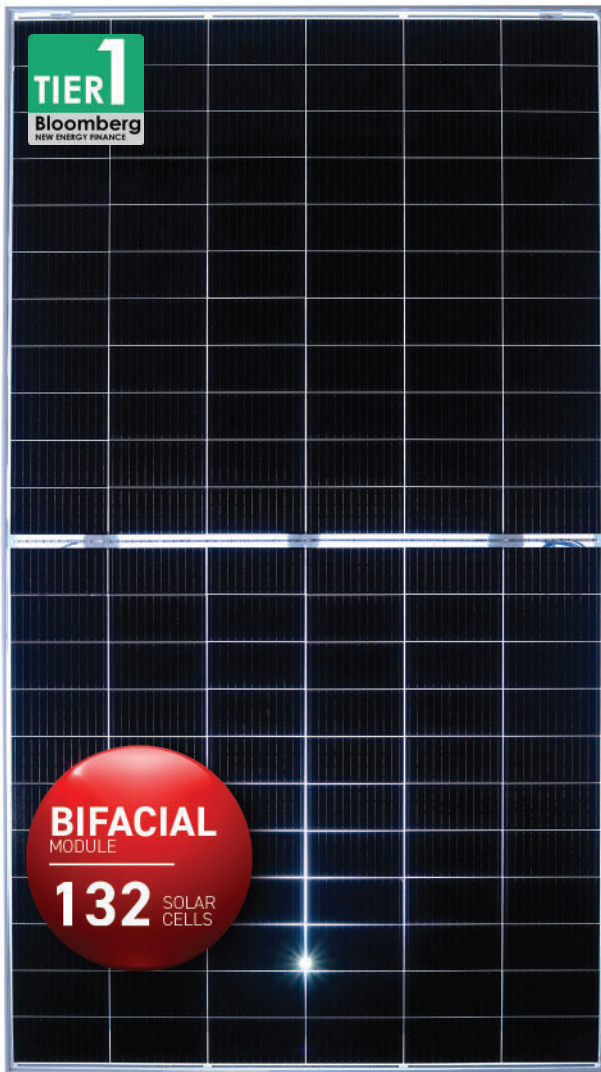
G12 HALF CUT

PRODUCT WARRANTY

12 YEARS

PERFORMANCE WARRANTY

30 YEARS



RELIABILITY IS IMPROVED

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



HIGHLY AUTOMATED PRODUCTION LINE

- Multi stage EL and digitalised visual inspection results in lower defect rates
- Implemented engineering excellence ensures top notch quality



LOWER LCOE

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



PROLONGED SAFETY ASSURANCE

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



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 61215 : 2021, IEC 61730, UL 61215, UL 61730, IS 14286, IS/IEC 61730, IEC 61701, IEC 62716, IEC 60068-2-68, 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.66.AAA.05 (AAA=655-680)

ELECTRICAL PARAMETERS | STC^{1,2}

Peak Power P_{max} (Wp)	655	660	665	670	675	680
Maximum Voltage V_{mpp} (V)	38.3	38.5	38.7	38.9	39.1	39.3
Maximum Current I_{mpp} (A)	17.12	17.16	17.2	17.22	17.27	17.31
Open Circuit Voltage V_{oc} (V)	45.9	46.1	46.3	46.5	46.7	46.9
Short Circuit Current I_{sc} (A)	17.93	17.99	18.05	18.11	18.17	18.23
Module Efficiency (%)	21.09	21.25	21.41	21.57	21.73	21.89

¹STC: 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/+5/+5 | ELECTRICAL MEASUREMENT UNCERTAINTY IS WITHIN ± 2%

ELECTRICAL PARAMETERS | NOCT³

Peak Power P_{max} (Wp)	489.4	492.4	496.8	499.3	503.5	507.16
Maximum Voltage V_{mpp} (V)	35.6	35.7	35.9	36	36.2	36.3
Maximum Current I_{mpp} (A)	13.75	13.79	13.84	13.88	13.93	13.97
Open Circuit Voltage V_{oc} (V)	42.7	42.9	43.1	43.3	43.5	43.6
Short Circuit Current I_{sc} (A)	14.48	14.53	14.58	14.63	14.68	14.73

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

ELECTRICAL PARAMETERS | BNPI^{4,5}

Peak Power P_{max} (Wp)	717	722	728	733	739	744
Maximum Voltage V_{mpp} (V)	38.3	38.5	38.7	38.9	39.1	39.3
Maximum Current I_{mpp} (A)	18.74	18.78	18.83	18.85	18.9	18.94
Open Circuit Voltage V_{oc} (V)	45.9	46.1	46.3	46.5	46.7	46.9
Short Circuit Current I_{sc} (A)	19.62	19.69	19.76	19.82	19.89	19.95

⁴ BNPI: 1000W/M² ± 0.135, BIFACILITY COEFF. (β) 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_{max} / 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	2384 X 1303 X 35 mm (93.86 x 51.30 x 1.38 inches)
Weight	39.5 Kg (87.08lbs)
Junction Box	IP 68, Split Junction Box with individual bypass diodes
Cable & Connectors*	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 ARC Semi-tempered glass (low iron content)
Cells	66 Mono PERC (132 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/ Alloy steel frame**
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Cell Encapsulant	EPE/ EVA
Maximum Series Fuse Rating	30 A
Hail Test	Ø 45mm Impact Velocity up to 27m/s

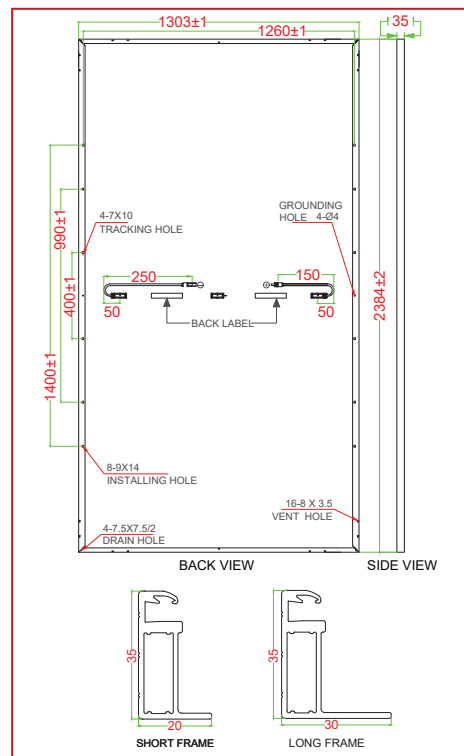
WARRANTY

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

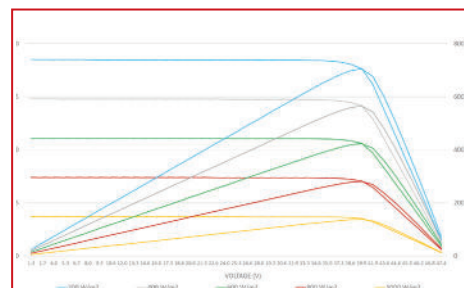
CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

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. Vikram Solar and all its accompanying logos are trademarks of Vikram Solar Limited registered in India.

DIMENSIONS IN MM

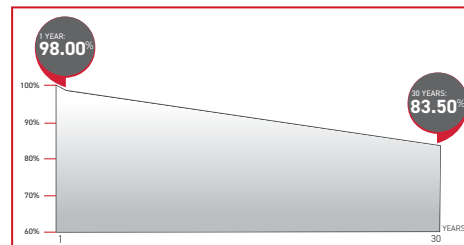


TYPICAL I-V CURVES⁷



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)	17
Quantity/Container (40'HC)	527

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 | STC : Standard Testing Condition | BNPI : Bifacial Nameplate Irradiance | NOCT : Nominal Operating Cell Temperature