

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



DCR CONTENT MODULE AVAILABLE

THIS DATASHEET IS APPLICABLE FOR: PARADEA VSMDH.66.AAA.05 (AAA=655-680)

ELECTRICAL PARAMETERS | STC^{1,2}

Parameter	655	660	665	670	675	680
Peak Power P_{max} (Wp)	655	660	665	670	675	680
Maximum Voltage V_{mpp} (V)	40.6	40.7	40.8	40.9	41	41.1
Maximum Current I_{mpp} (A)	16.14	16.22	16.3	16.4	16.5	16.56
Open Circuit Voltage V_{oc} (V)	47.6	47.7	47.8	48	48.1	48.28
Short Circuit Current I_{sc} (A)	17.31	17.4	17.48	17.55	17.56	17.56
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 | ²TOLERANCE OF RATING AT STC ($P_{max} / I_{sc} / V_{oc}$) [%]: 0-3/±5/±5 | ELECTRICAL MEASUREMENT UNCERTAINTY IS WITHIN ± 2%

ELECTRICAL PARAMETERS | NOCT³

Parameter	490.2	494.1	497.2	501.2	504.6	508.4
Peak Power P_{max} (Wp)	490.2	494.1	497.2	501.2	504.6	508.4
Maximum Voltage V_{mpp} (V)	37	37.1	37.1	37.3	37.4	37.5
Maximum Current I_{mpp} (A)	13.3	13.3	13.4	13.5	13.5	13.6
Open Circuit Voltage V_{oc} (V)	44.3	44.4	44.5	44.6	44.7	44.8
Short Circuit Current I_{sc} (A)	14	14.1	14.1	14.2	14.3	14.3

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

ELECTRICAL PARAMETERS | BNPI^{4,5}

Parameter	717	722	728	733	739	744
Peak Power P_{max} (Wp)	717	722	728	733	739	744
Maximum Voltage V_{mpp} (V)	40.6	40.7	40.8	40.9	41	41.1
Maximum Current I_{mpp} (A)	17.7	17.8	17.8	17.9	18	18.1
Open Circuit Voltage V_{oc} (V)	47.6	47.7	47.8	48	48.1	48.3
Short Circuit Current I_{sc} (A)	18.9	19	19.1	19.2	19.2	19.2

⁴BNPI: 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 | ⁵TOLERANCE 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 (87.08 lbs)
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	POE/ EPE/ EVA
Maximum Series Fuse Rating	30 A
Hail Test	Ø 45mm Impact Velocity up to 27m/s

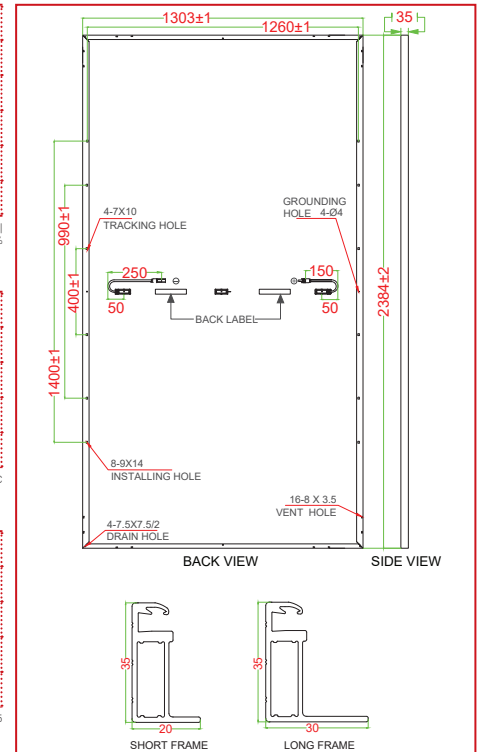
WARRANTY

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

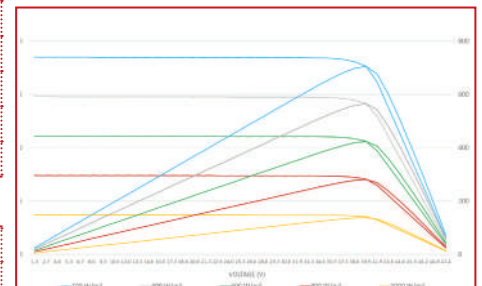
CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

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DIMENSIONS IN MM

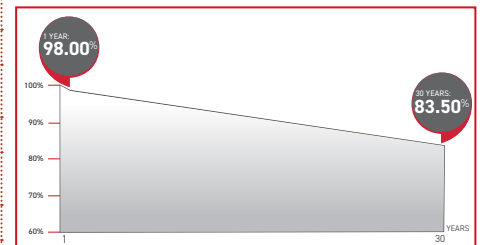


TYPICAL I-V CURVES⁷



⁷AVERAGE 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