

620-650W

SUBSTRATE
GLASS ●
MESH GLASS ●

FRAME TYPE
ALUMINIUM ●

FRAME VARIANT
SILVER ●
BLACK ●

MAXIMUM EFFICIENCY %

24.06

CELL TYPE

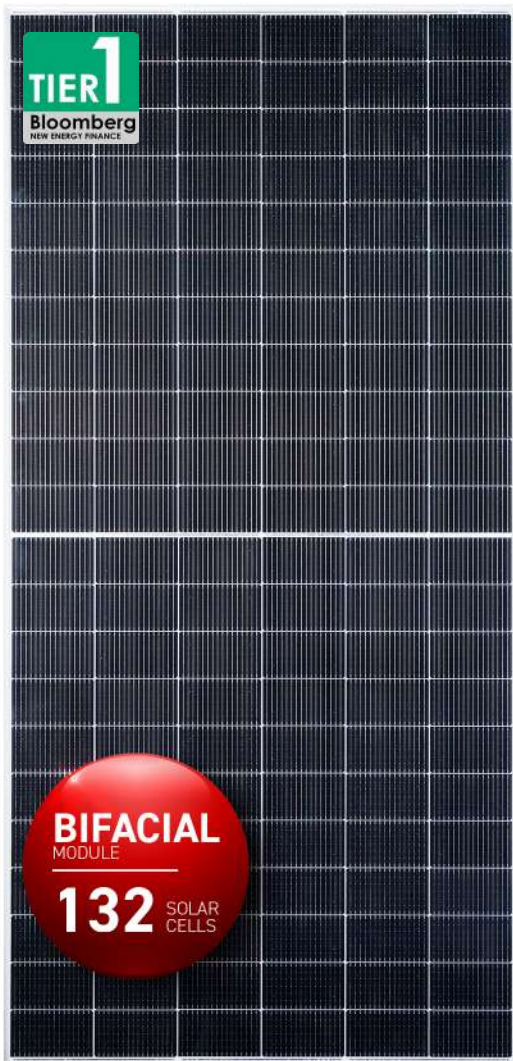
G12R HALF CUT

PRODUCT WARRANTY

12 YEARS

PERFORMANCE WARRANTY

30 YEARS



LOWER LCOE

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



0% NEGATIVE POWER TOLERANCE

- Positive power tolerance of upto 0 ~ 4.99Wp
- Module current binning radically reduces string mismatch losses



IMPROVED LONGEVITY

- Excellent anti-PID performance via optimized process and materials control
- Lower susceptibility to LID & LeTID



PREMIUM PERFORMANCE PARAMETERS

- N-TYPE solar cell upto 80% bifaciality, brings higher energy yield from rear side
- Lower temperature coefficient minimizing generation losses at high temperature



SUPERIOR HAIL TEST PERFORMANCE

- ≥Ø35mm hail test passed from third party laboratory

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: HYPERSOL VSMDDH.66.AAA.05 (AAA=620-650)

ELECTRICAL PARAMETERS | STC^{1,2}

Peak Power P_{max} (Wp)	620	625	630	635	640	645	650
Maximum Voltage V_{mpp} (V)	41.2	41.4	41.6	41.8	42.0	42.2	42.4
Maximum Current I_{mpp} (A)	15.05	15.1	15.15	15.20	15.25	15.30	15.35
Open Circuit Voltage V_{oc} (V)	49.1	49.3	49.5	49.7	49.9	50.1	50.3
Short Circuit Current I_{sc} (A)	15.95	16	16.05	16.11	16.16	16.22	16.27
Module Efficiency (%)	22.95	23.14	23.32	23.51	23.69	23.88	24.06

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/±5/±5 | ELECTRICAL MEASUREMENT UNCERTAINTY IS WITHIN ± 2%

ELECTRICAL PARAMETERS | NOCT³

Peak Power P_{max} (Wp)	470.0	474.4	478.2	482.2	486.1	490.0	493.9
Maximum Voltage V_{mpp} (V)	38.5	38.6	38.8	38.9	39.1	39.2	39.4
Maximum Current I_{mpp} (A)	12.22	12.28	12.32	12.37	12.41	12.45	12.50
Open Circuit Voltage V_{oc} (V)	46.4	46.6	46.8	47.0	47.2	47.4	47.6
Short Circuit Current I_{sc} (A)	12.88	12.92	12.97	13.01	13.06	13.10	13.15

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)	682.8	688.3	693.8	699.3	704.8	710.3	715.8
Maximum Voltage V_{mpp} (V)	41.2	41.4	41.6	41.8	42	42.2	42.4
Maximum Current I_{mpp} (A)	16.57	16.63	16.68	16.74	16.79	16.85	16.90
Open Circuit Voltage V_{oc} (V)	49.1	49.3	49.5	49.7	49.9	50.1	50.3
Short Circuit Current I_{sc} (A)	17.56	17.62	17.68	17.74	17.80	17.86	17.92

4) BNPI: 1000W/M²±q.135, BIFACILITY COEFF. (q) AT BNPI P_{max} , I_{sc} IS 75±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 (Tc) PERMISSIBLE OPERATING CONDITIONS

Tc of Open Circuit Voltage (β)	-0.25%/°C
Tc of Short Circuit Current (α)	0.045%/°C
Tc of Power (γ)	-0.28%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

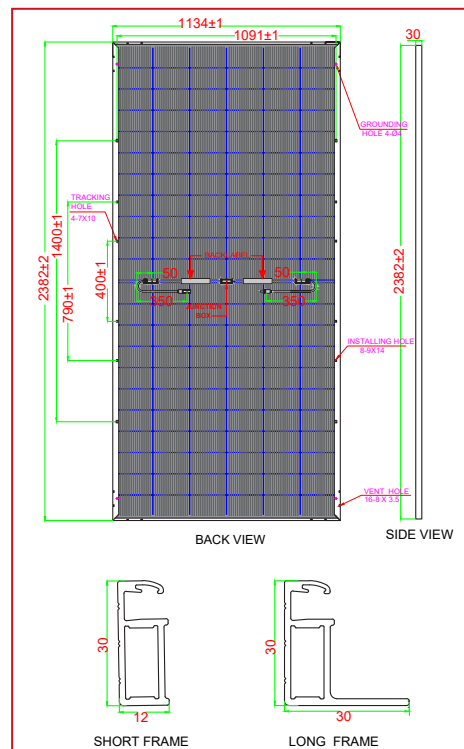
MECHANICAL DATA

Length × Width × Height	2382 X 1134 X 30 mm (93.78 x 44.65 x 1.18 inches)
Weight	33.4Kg ±5% (73.63lbs)
Junction Box	IP 68, 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 (0.08 inches) high transmission ARC Semi-tempered glass (low iron content)
Cells	66 (132 half-cells) N-TYPE bifacial solar cells
Substrate	2.0 mm (0.08 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	EPE/EPE
Maximum Series Fuse Rating	30A
Hail Test	≥ Ø 35 mm

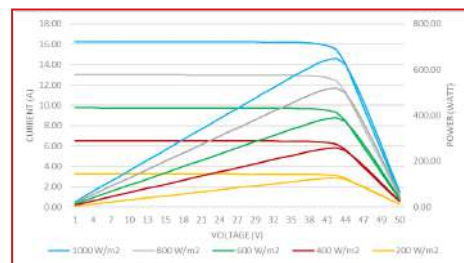
WARRANTY

Product Warranty**	12 years
Performance Warranty**	Linear Power Warranty for 30 years with 1% for 1 st year degradation and 0.4% from year 2 to year 30

DIMENSIONS IN MM

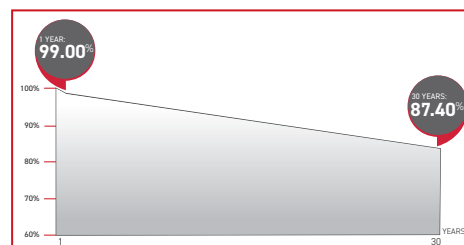


TYPICAL I-V CURVES⁶



6) AVERAGE RELATIVE EFFICIENCY REDUCTION OF 5% AT 200 W/M² ACCORDING TO EN 60904-1

PERFORMANCE WARRANTY



PACKAGING INFORMATION

Quantity /Pallet	37
Pallets/Container (40'HC)	20
Quantity/Container (40'HC)	740

All () certifications under progress. | **Refer to Vikram Solar's warranty document for terms and conditions. | *1200mm (47.24 inches), 1400mm (55.12 inches), 1600mm (62.99 inches) cable lengths are also available | **Anti-glare Glass is also available 1*As per applicable product | STC: Standard Testing Condition | BNPI: Bifacial Nameplate Irradiance | NOCT: Nominal Operating Cell Temperature

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

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