

HYPERSOL

HIGH EFFICIENCY N-TYPE PV MODULE

Mono PERC ● N-TYPE ● HJT

MODEL:
HYPERSOL VSM DH.66.AAA.05

610-635W

SUBSTRATE
GLASS ●
MESH GLASS ●

FRAME TYPE
ALUMINIUM ●

FRAME VARIANT
SILVER ●
BLACK ●

MAXIMUM EFFICIENCY %

23.51

CELL TYPE

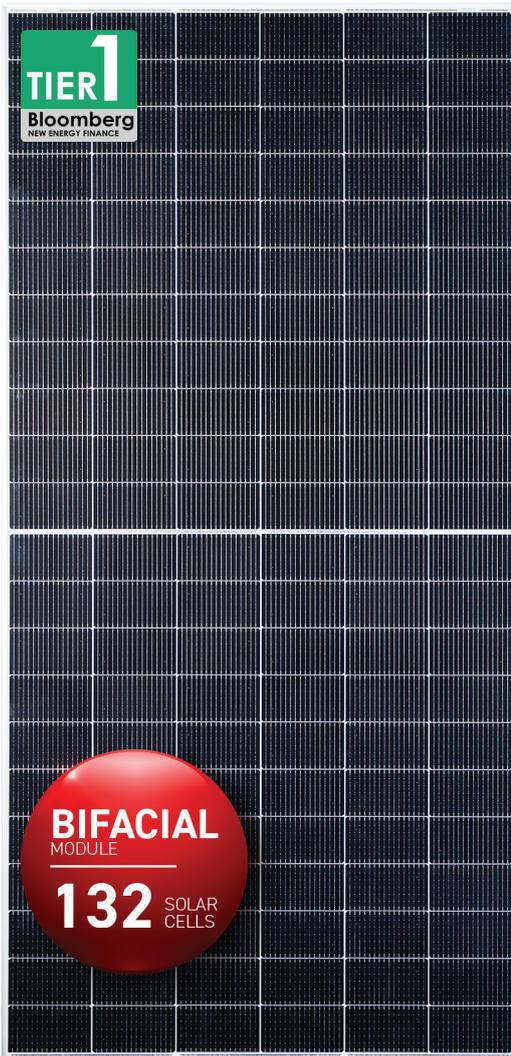
G12R HALF CUT

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

- ø 40mm 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

Monocrystalline Solar PV Modules, Bifacial, GG, G12R N-TYPE


vikram solar
CREATING CLIMATE FOR CHANGE

THIS DATASHEET IS APPLICABLE FOR: HYPERSOL VSMDH.66.AAA.05 (AAA=610-635)

ELECTRICAL PARAMETERS | STC^{1,2}

Peak Power P _{max} (Wp)	610	615	620	625	630	635
Maximum Voltage V _{mpp} (V)	40.8	41	41.2	41.4	41.6	41.8
Maximum Current I _{mpp} (A)	14.95	15.00	15.05	15.10	15.15	15.20
Open Circuit Voltage V _{oc} (V)	48.7	48.9	49.1	49.3	49.5	49.7
Short Circuit Current I _{sc} (A)	15.83	15.89	15.95	16.00	16.05	16.11
Module Efficiency (%)	22.58%	22.77%	22.95%	23.14%	23.32%	23.51%

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)	462.00	465.80	469.70	473.40	477.25	481.06
Maximum Voltage V _{mpp} (V)	38.10	38.20	38.40	38.60	38.80	39.00
Maximum Current I _{mpp} (A)	12.14	12.19	12.23	12.28	12.33	12.37
Open Circuit Voltage V _{oc} (V)	46.00	46.10	46.30	46.50	46.70	46.90
Short Circuit Current I _{sc} (A)	12.80	12.84	12.89	12.93	12.98	13.02

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)	675.9	681.4	687.0	692.5	698.0	703.6
Maximum Voltage V _{mpp} (V)	40.8	41	41.2	41.34	41.54	41.73
Maximum Current I _{mpp} (A)	16.57	16.62	16.67	16.73	16.78	16.84
Open Circuit Voltage V _{oc} (V)	48.7	48.9	49.1	49.3	49.5	49.7
Short Circuit Current I _{sc} (A)	17.54	16.62	16.67	17.72	17.79	17.85

⁴) BNPI: 1000W/M² ± 0.135, BIFACILITY COEFF. (β) 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)	-0.26%/°C
Tc of Short Circuit Current (α)	0.052%/°C
Tc of Power (γ)	-0.28%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

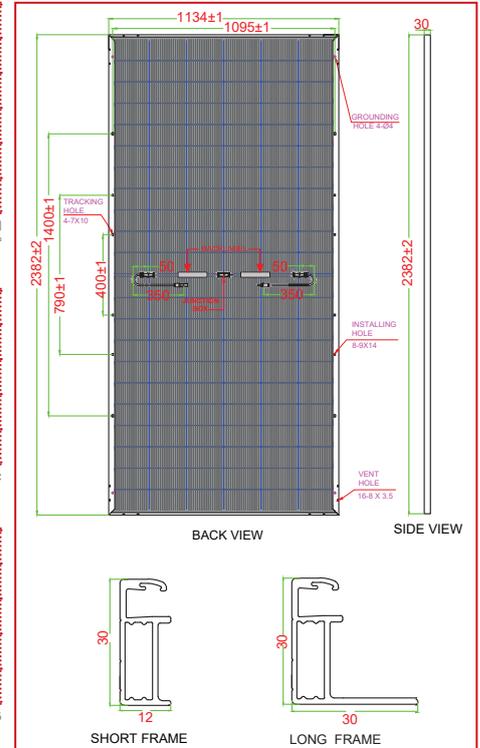
MECHANICAL DATA

Length × Width × Height	2382 X 1134 X 30 mm (93.78 x 44.65 x 1.18 inches)
Weight	32.1Kg ±5% (71.65 lbs)
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 (0.098 inches) high transmission ARC Semi-tempered glass (low iron content)
Cells	66 (132 half-cells) N-TYPE bifacial solar cells
Substrate	2.0 mm (0.098 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	EPE/ EVA
Maximum Series Fuse Rating	30 A
Hail Test	Ø 40mm

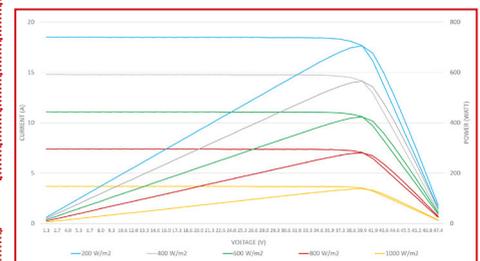
WARRANTY

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

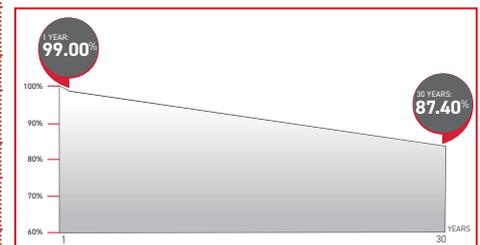


TYPICAL I-V CURVES⁶



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

PERFORMANCE WARRANTY



PACKAGING INFORMATION

Quantity /Pallet	36
Pallets/Container (40'HC)	20
Quantity/Container (40'HC)	720

^{*}All (°) certifications under progress. | ^{**}Refer to Vikram Solar's warranty document for terms and conditions. | [#]1400mm (55.12 inches), 1600mm (62.99 inches) cable lengths are also available | ^{##}Anti-glare Glass is also available | ^{##}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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