

# 565-590W

SUBSTRATE  
 GLASS ●  
**MESH GLASS ●**

FRAME TYPE  
**ALUMINIUM ●**  
 STEEL ●

FRAME VARIANT  
**SILVER ●**  
 BLACK ●

MAXIMUM EFFICIENCY %  
**22.87**

CELL TYPE  
**M10 HALF CUT**

PRODUCT WARRANTY  
**12 YEARS**

PERFORMANCE WARRANTY  
**30 YEARS**



### 0% NEGATIVE POWER TOLERANCE

- Positive power tolerance of upto 0 ~ 4.99Wp
- Module  $I_{mp}$  binning radically reduces string mismatch losses



### IMPROVED LONGEVITY

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



### LOWER LCOE

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



### HIGHLY AUTOMATED PRODUCTION LINE

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



### 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: HYPERSOL VSM DH.72.AAA.05 (AAA=565-590)

**ELECTRICAL PARAMETERS | STC<sup>1,2</sup>**

Peak Power P <sub>max</sub> (Wp)	565	570	575	580	585	590
Maximum Voltage V <sub>mpp</sub> (V)	42.2	42.4	42.6	42.8	43.0	43.2
Maximum Current I <sub>mpp</sub> (A)	13.4	13.46	13.51	13.56	13.62	13.67
Open Circuit Voltage V <sub>oc</sub> (V)	50.3	50.5	50.7	50.9	51.1	51.3
Short Circuit Current I <sub>sc</sub> (A)	14.03	14.09	14.14	14.20	14.26	14.32
Module Efficiency (%)	21.89	22.09	22.28	22.47	22.67	22.87

1) STC: 1000 W/M<sup>2</sup> IRRADIANCE, 25°C CELL TEMPERATURE, AM1.5G SPECTRUM ACCORDING TO EN 60904-3 | 2) TOLERANCE OF RATING AT STC (P<sub>max</sub> / I<sub>sc</sub> / V<sub>oc</sub>) [%]: 0-3/+5/+5 | ELECTRICAL MEASUREMENT UNCERTAINTY IS WITHIN ± 2%

**ELECTRICAL PARAMETERS | NOCT<sup>3</sup>**

Peak Power P <sub>max</sub> (Wp)	426	430	433	437	443	447
Maximum Voltage V <sub>mpp</sub> (V)	39.6	39.8	40.0	40.2	40.6	40.9
Maximum Current I <sub>mpp</sub> (A)	10.76	10.78	10.82	10.88	10.91	10.94
Open Circuit Voltage V <sub>oc</sub> (V)	47.3	47.5	47.7	47.9	48.2	48.5
Short Circuit Current I <sub>sc</sub> (A)	11.33	11.38	11.42	11.47	11.51	11.55

3) NOCT IRRADIANCE 800 W/M<sup>2</sup>, AMBIENT TEMPERATURE 20°C, WIND SPEED 1 M/SEC

**ELECTRICAL PARAMETERS | BNPI<sup>4,5</sup>**

Peak Power P <sub>max</sub> (Wp)	626	632	637	643	648	654
Maximum Voltage V <sub>mpp</sub> (V)	42.2	42.4	42.6	42.8	43.0	43.2
Maximum Current I <sub>mpp</sub> (A)	14.85	14.91	14.97	15.02	15.09	15.15
Open Circuit Voltage V <sub>oc</sub> (V)	50.3	50.5	50.7	50.9	51.1	51.3
Short Circuit Current I <sub>sc</sub> (A)	15.55	15.61	15.67	15.73	15.80	15.86

4) BNPI: 1000W/M<sup>2</sup>±q.135, BIFACILITY COEFF. (q) AT BNPI P<sub>max</sub>, I<sub>sc</sub> IS 80±5% & FOR V<sub>oc</sub> IS 99±10%, AM 1.5, 25°C | 5) TOLERANCE OF RATING AT BNPI (P<sub>max</sub> / I<sub>sc</sub> / V<sub>oc</sub>) [%]: 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)	0.046%/°C
Tc of Power (γ)	-0.30%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

**MECHANICAL DATA**

Length × Width × Height	2278 X 1134 X 30 mm (89.68 x 44.65 x 1.18 inches)
Weight	33.4 Kg (73.63 lbs)
Junction Box	IP 68, Split Junction Box with individual bypass diodes
Cable & Connectors <sup>#</sup>	200 mm (+ve terminal) and 300 mm (-ve terminal) length cables, MC4 Compatible/MC4 Connectors
Application Class	Class A (Safety class II)
Superstrate <sup>##</sup>	2.0 mm (0.098 inches) high transmission ARC Semi-tempered glass (low iron content)
Cells	72 (144 half-cells) TOPCon n-Type bifacial solar cells
Substrate	2.0 mm (0.098 inches) high transmission heat strengthened glass/ mesh glass <sup>##</sup> (low iron content)
Frame	Anodized aluminium/ Alloy steel frame <sup>##</sup>
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Cell Encapsulant	EPE/ EVA
Maximum Series Fuse Rating	30A
Hail Test <sup>*</sup>	Ø 45mm   Impact Velocity up to 27m/s

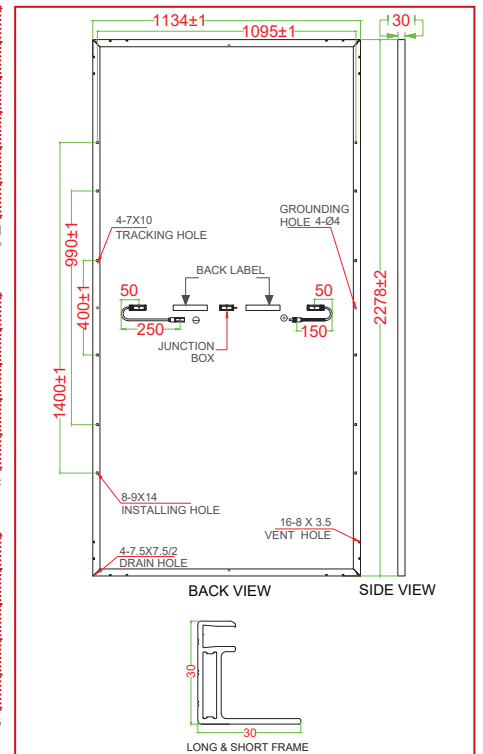
**WARRANTY**

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

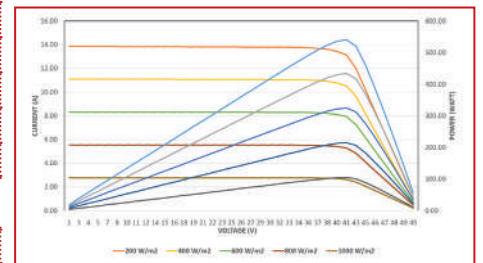
**CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.**

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**DIMENSIONS IN MM**

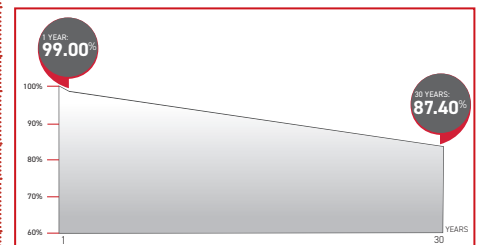


**TYPICAL I-V CURVES<sup>6</sup>**



6) AVERAGE RELATIVE EFFICIENCY REDUCTION OF 5% AT 200 W/M<sup>2</sup> ACCORDING TO EN 60904-1

**PERFORMANCE WARRANTY**



**PACKAGING INFORMATION**

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

<sup>#</sup>All (\*) certifications under progress. | <sup>\*\*</sup>Refer to Vikram Solar's warranty document for terms and conditions. | <sup>##</sup>400mm(15.75 inches), 1000mm(39.37 inches), 1200mm (47.24 inches) cable lengths are also available | <sup>†</sup>Anti-glare Glass is also available | <sup>††</sup>As per applicable product | <sup>†††</sup>With additional Cost & Lead Time subject to availability | STC: Standard Testing Condition | BNPI: Bifacial Nameplate Irradiance | NOCT: Nominal Operating Cell Temperature