

## 690-715W

SUBSTRATE  
GLASS ●  
MESH GLASS ●

FRAME TYPE  
ALUMINIUM ●  
STEEL ●

FRAME VARIANT  
SILVER ●  
BLACK ●

MAXIMUM EFFICIENCY %

### 23.02

CELL TYPE

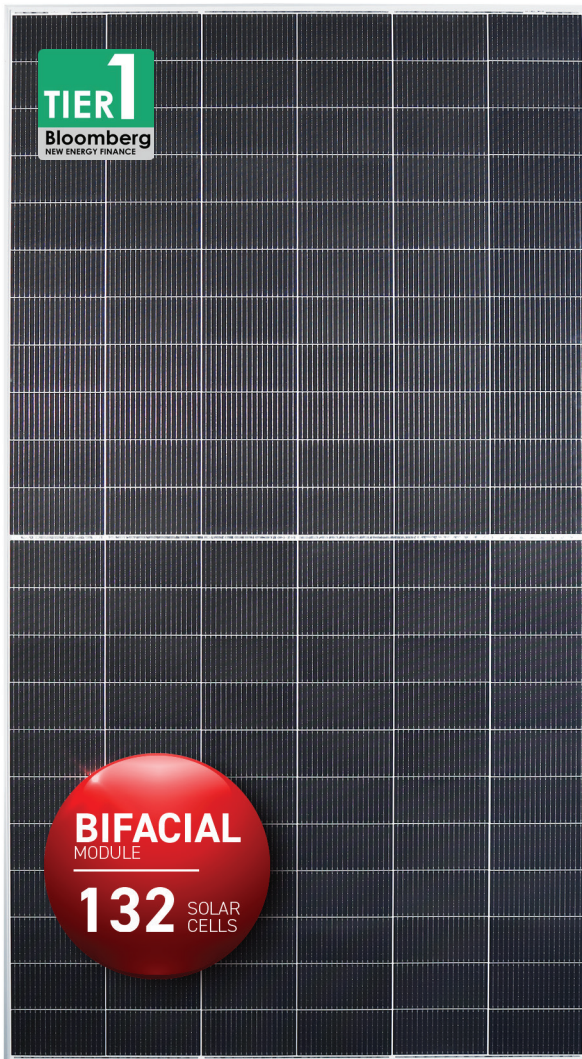
### G12 HALF CUT

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 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.66.AAA.05 (AAA=690-715)

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

|                                    |       |       |       |       |       |       |
|------------------------------------|-------|-------|-------|-------|-------|-------|
| Peak Power $P_{max}$ (Wp)          | 690   | 695   | 700   | 705   | 710   | 715   |
| Maximum Voltage $V_{mpp}$ (V)      | 39.7  | 39.9  | 40.1  | 40.2  | 40.4  | 40.6  |
| Maximum Current $I_{mpp}$ (A)      | 17.38 | 17.43 | 17.48 | 17.53 | 17.58 | 17.63 |
| Open Circuit Voltage $V_{oc}$ (V)  | 47.3  | 47.5  | 47.6  | 47.8  | 48.0  | 48.1  |
| Short Circuit Current $I_{sc}$ (A) | 18.29 | 18.36 | 18.43 | 18.5  | 18.57 | 18.64 |
| Module Efficiency (%)              | 22.21 | 22.37 | 22.53 | 22.70 | 22.86 | 23.02 |

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 ( $P_{max}$  /  $I_{sc}$  /  $V_{oc}$ ) [%]: 0-3/+5/+5 | ELECTRICAL MEASUREMENT UNCERTAINTY IS WITHIN ± 2%

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

|                                    |       |       |       |       |       |       |
|------------------------------------|-------|-------|-------|-------|-------|-------|
| Peak Power $P_{max}$ (Wp)          | 519.5 | 523.4 | 527.3 | 531.2 | 535.1 | 539   |
| Maximum Voltage $V_{mpp}$ (V)      | 37.1  | 37.2  | 37.3  | 37.4  | 37.5  | 37.6  |
| Maximum Current $I_{mpp}$ (A)      | 14.03 | 14.08 | 14.13 | 14.18 | 14.23 | 14.28 |
| Open Circuit Voltage $V_{oc}$ (V)  | 44.4  | 44.6  | 44.8  | 45    | 45.2  | 45.4  |
| Short Circuit Current $I_{sc}$ (A) | 14.78 | 14.83 | 14.88 | 14.93 | 14.98 | 15.03 |

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 $P_{max}$ (Wp)          | 765   | 770   | 776   | 781   | 787   | 792   |
| Maximum Voltage $V_{mpp}$ (V)      | 39.7  | 39.9  | 40.1  | 40.2  | 40.4  | 40.6  |
| Maximum Current $I_{mpp}$ (A)      | 19.26 | 19.31 | 19.37 | 19.42 | 19.48 | 19.53 |
| Open Circuit Voltage $V_{oc}$ (V)  | 47.3  | 47.5  | 47.6  | 47.8  | 48    | 48.1  |
| Short Circuit Current $I_{sc}$ (A) | 20.27 | 20.34 | 20.42 | 20.50 | 20.58 | 20.65 |

4) BNPI: 1000W/M<sup>2</sup>+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)  | -0.26%/°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 |

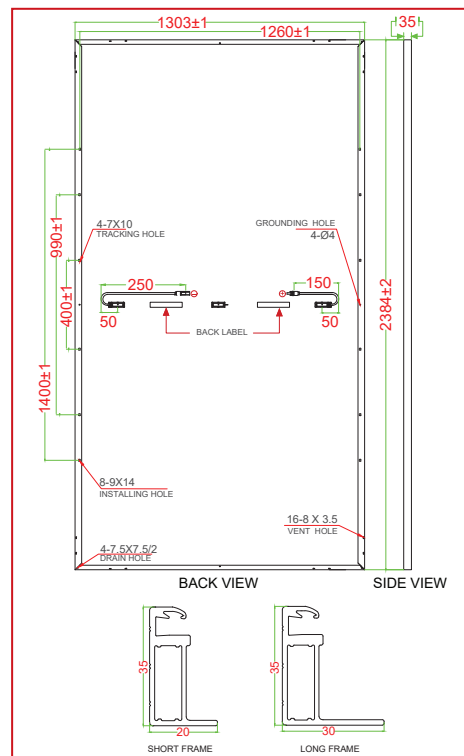
### MECHANICAL DATA

|                            |                                                                                                  |
|----------------------------|--------------------------------------------------------------------------------------------------|
| Length × Width × Height    | 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 (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/ 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                                                             |

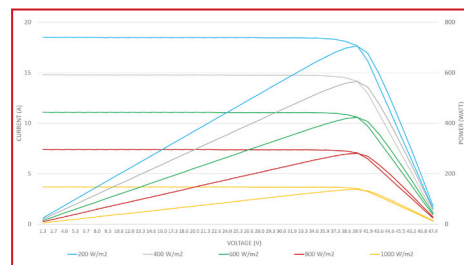
### WARRANTY

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

### DIMENSIONS IN MM

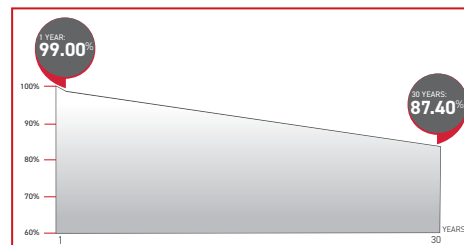


### TYPICAL I-V CURVES<sup>6</sup>



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           | 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

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

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