

535-560W

SUBSTRATE
GLASS ●
 MESH GLASS ●

FRAME TYPE
 ALUMINIUM ●
STEEL ●

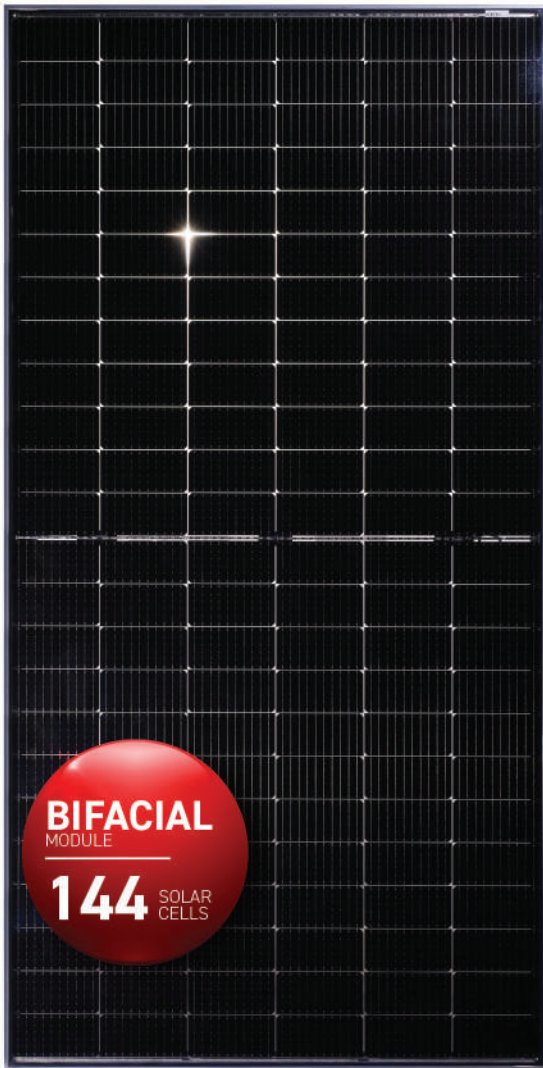
FRAME VARIANT
SILVER ●
 BLACK ●

MAXIMUM EFFICIENCY %
21.72

CELL TYPE
M10 HALF CUT

PRODUCT WARRANTY
12 YEARS

PERFORMANCE WARRANTY
30 YEARS



PVEL TOP PERFORMER MODEL

- Benchmarked for highest standards of long-term module reliability and performance



OPTIMIZED FRAME DESIGN

- Alloy steel frame with twin wall structure for higher strength
- Packaging capacity improved with more modules per container



RELIABILITY IS IMPROVED

- Higher corrosion resistance to severe conditions of sand dust, concentrated ammonia and salt mist
- Low risk of module warping & micro cracking



LOWER LCOE

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



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: PARADEA VSM DH.72.AAA.05 (AAA=535-560)

ELECTRICAL PARAMETERS | STC^{1,2}

| Parameter | 535 | 540 | 545 | 550 | 555 | 560 |
|------------------------------------|-------|-------|-------|-------|-------|-------|
| Peak Power P_{max} (Wp) | 535 | 540 | 545 | 550 | 555 | 560 |
| Maximum Voltage V_{mpp} (V) | 41.6 | 41.7 | 41.8 | 41.9 | 42 | 42.1 |
| Maximum Current I_{mpp} (A) | 12.87 | 12.96 | 13.05 | 13.14 | 13.23 | 13.32 |
| Open Circuit Voltage V_{oc} (V) | 49.4 | 49.5 | 49.6 | 49.7 | 49.8 | 49.9 |
| Short Circuit Current I_{sc} (A) | 13.56 | 13.64 | 13.73 | 13.82 | 13.95 | 14.05 |
| Module Efficiency (%) | 20.75 | 20.94 | 21.13 | 21.33 | 21.52 | 21.72 |

¹STC: 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

| Parameter | 399.20 | 402.80 | 406.70 | 410.60 | 414.20 | 418.10 |
|------------------------------------|--------|--------|--------|--------|--------|--------|
| Peak Power P_{max} (Wp) | 399.20 | 402.80 | 406.70 | 410.60 | 414.20 | 418.10 |
| Maximum Voltage V_{mpp} (V) | 38.40 | 38.40 | 38.70 | 38.80 | 39.10 | 39.20 |
| Maximum Current I_{mpp} (A) | 10.39 | 10.48 | 10.51 | 10.58 | 10.59 | 10.66 |
| Open Circuit Voltage V_{oc} (V) | 46.00 | 46.00 | 46.20 | 46.20 | 46.70 | 46.80 |
| Short Circuit Current I_{sc} (A) | 10.96 | 11.06 | 11.09 | 11.17 | 11.17 | 11.24 |

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

ELECTRICAL PARAMETERS | BNPI^{4,5}

| Parameter | 586 | 591 | 597 | 602 | 607 | 613 |
|------------------------------------|------|------|------|------|------|------|
| Peak Power P_{max} (Wp) | 586 | 591 | 597 | 602 | 607 | 613 |
| Maximum Voltage V_{mpp} (V) | 41.6 | 41.7 | 41.8 | 41.9 | 42 | 42.1 |
| Maximum Current I_{mpp} (A) | 14.1 | 14.2 | 14.3 | 14.4 | 14.5 | 14.6 |
| Open Circuit Voltage V_{oc} (V) | 49.4 | 49.5 | 49.6 | 49.7 | 49.8 | 49.9 |
| Short Circuit Current I_{sc} (A) | 14.1 | 14.2 | 14.3 | 14.4 | 14.5 | 14.6 |

⁴ BNPI: 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 | 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) | -0.27%/°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 | 2274 × 1134 × 30 mm (89.52 × 44.65 × 1.18 inches) |
| Weight | 34.5 Kg (76.06 lbs) |
| Junction Box | IP68, 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 | 72 Mono PERC (144 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 | 25 A |
| Hail Test | Ø 45mm Impact Velocity up to 27m/s |

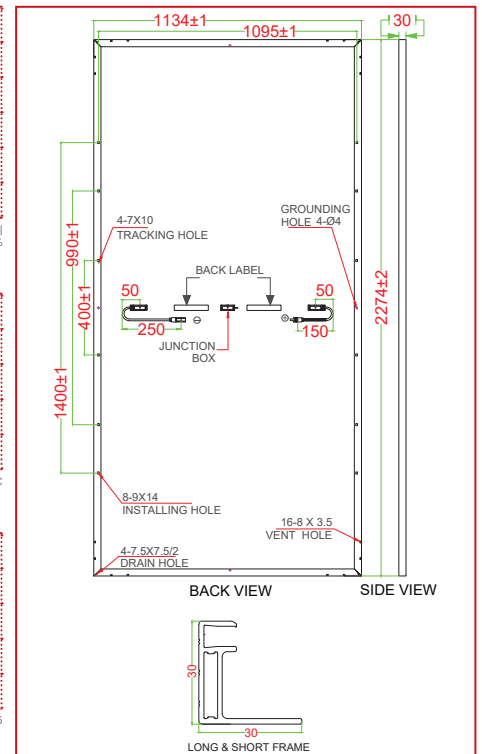
WARRANTY

| | |
|------------------------------------|---|
| 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 |

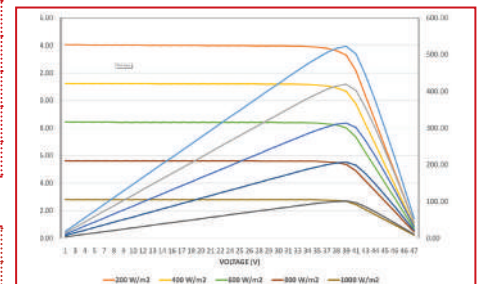
CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

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DIMENSIONS IN MM

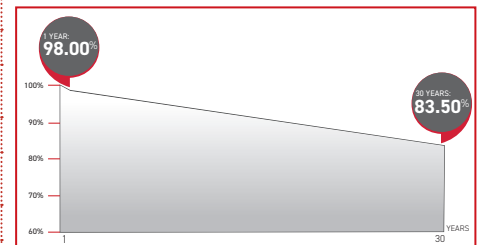


TYPICAL I-V CURVES⁷



⁷ 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. [†]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