

# TRANSFORMING THE POWER OF SUN



## BIFACIAL SOLAR PV MODULE 535-555 Wp TRANSPARENT BACKSHEET

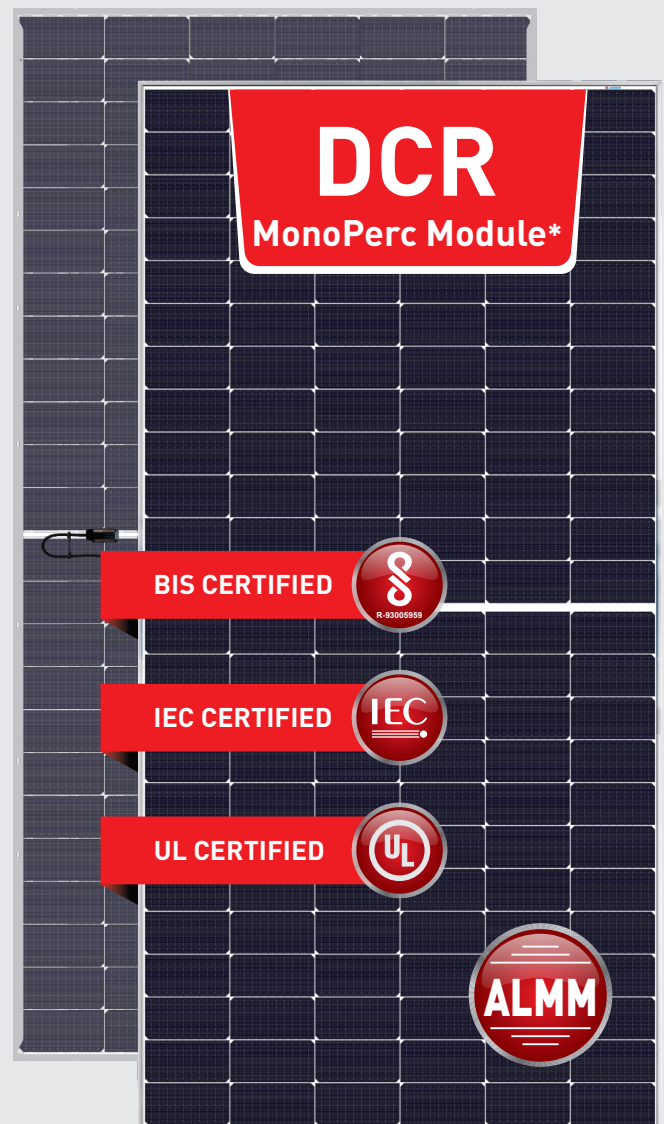
Best in Class Efficiency **21.50%**

MBB Technology **M10 Half Cut (144 Cells)**  
Bifacial Module With Transparent Backsheet

**Non-Destructive Cell Cutting (NDC)**

### FEATURES

-  Low LID Degradation using PERC Technology -  
Enhanced Power Generation During its Life Cycle
-  Improved Temperature Coefficients -  
Better Generation at Higher Temperature
-  Reduced Resistive Loss with MBB Technology -  
Excellent Module Performance
-  Half Cut Cell Design - Excellent Performance  
Under Partial Shading Conditions
-  Lower LCOE (Levelized Cost of Electricity) -  
Faster Return on Investment (ROI)
-  Manufactured in Fully Automatic Production Line
-  100% in line Hi-Pot testing, 100% EL Testing at  
3 stages – Stringer, In process and Final Testing
-  Manufactured using certified Tier 1 BOM Meeting  
Highest Quality Standards
-  Better reliability under Extreme Environmental  
Conditions
-  Bifacial gain of **Up To 25% with Transparent Backsheet  
Module**, capable of energy generation with both direct  
and reflected sunlight.



#### Approvals and Certificates:

IS 14286, IEC 61215, IEC 61730 (I & II), IEC 61853  
IEC 62804, IEC 60068, IEC 61701, IEC 62716, UL 61730  
ISO 9001:2015, 14001:2015, 45001:2018 certified





**BIFACIAL SOLAR PV MODULES  
WITH TRANSPARENT BACKSHEET**  
**535-555Wp**



**ELECTRICAL DATA - STC**

| Model                      | Unit | JH-535BT | JH-540BT | JH-545BT | JH-550BT | JH-555BT |
|----------------------------|------|----------|----------|----------|----------|----------|
| Capacity Rating Wp         | Pmax | 535      | 540      | 545      | 550      | 555      |
| Max. Power Voltage in V    | Vmp  | 41.47    | 41.64    | 41.8     | 41.93    | 42.05    |
| Max. Power Current in A    | Imp  | 12.90    | 12.97    | 13.04    | 13.12    | 13.2     |
| Open Circuit Voltage in V  | Voc  | 49.45    | 49.60    | 49.75    | 49.90    | 50.00    |
| Short Circuit Current in A | Isc  | 13.79    | 13.86    | 13.92    | 13.98    | 14.05    |
| Module Efficiency          | %    | 20.73    | 20.92    | 21.12    | 21.31    | 21.50    |
| Power Tolerance            | Wp   | -0/+4.99 |          |          |          |          |

STC: Irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m<sup>2</sup> according to EN 60904-1. Measurement uncertainty ±3%

**BI-FACIAL OUTPUT - REARSIDE POWER GAIN\*\***

|                    |                       | JH-535BT | JH-540BT | JH-545BT | JH-550BT | JH-555BT |
|--------------------|-----------------------|----------|----------|----------|----------|----------|
| 10%                | Power Output (W)      | 589      | 594      | 600      | 605      | 611      |
|                    | Module Efficiency (%) | 22.82    | 23.01    | 23.25    | 23.44    | 23.67    |
| 15%                | Power Output (W)      | 615      | 621      | 627      | 633      | 638      |
|                    | Module Efficiency (%) | 23.83    | 24.06    | 24.29    | 24.53    | 24.72    |
| 20%                | Power Output (W)      | 642      | 648      | 654      | 660      | 666      |
|                    | Module Efficiency (%) | 24.87    | 25.11    | 25.34    | 25.57    | 25.80    |
| 25%                | Power Output (W)      | 669      | 675      | 681      | 688      | 694      |
|                    | Module Efficiency (%) | 25.92    | 26.15    | 26.39    | 26.66    | 26.89    |
| Bifaciality Factor |                       | 70±5%    |          |          |          |          |

\*\*Bifaciality gain is dependent on various factors (Ground Reflectance, Tilt Angle, Location, etc.)

**MECHANICAL DATA**

|                          |                                                                                                                           |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Dimensions (L x W x H)   | MM: 2278 x 1133 x 35   IN: 89.68 x 44.60 x 1.37                                                                           |
| Weight                   | 28 kgs   61.73 lbs                                                                                                        |
| Junction Box             | Split JB, IP 68 with 3 bypass diodes                                                                                      |
| Cable                    | Solar Cable 4.0 mm <sup>2</sup> / 0.006 in <sup>2</sup> , 400 mm / 15.75 in<br>(Higher cable option available on request) |
| Front Superstrate        | 3.2 mm / 0.126 in, High Transmission, AR coated tempered glass                                                            |
| Solar Cells              | Mono PERC Crystalline - M10 DCR* (144 pcs Half Cut)                                                                       |
| Cell Encapsulation       | EVA & EPE (PID & UV Resistant)                                                                                            |
| Back Substrate           | Transparent Backsheet                                                                                                     |
| Frame                    | Anodized Aluminium Alloy                                                                                                  |
| Mechanical Load Strength | 5400 Pa (Snow Load), 2400 Pa (Wind Load)                                                                                  |

**TEMPERATURE RATINGS**

|                                           |             |
|-------------------------------------------|-------------|
| Nominal Operating Cell Temperature (NOCT) | 45°C (±2°C) |
| Temperature Coefficient of Voc            | -0.27%/°C   |
| Temperature Coefficient of Isc            | 0.045%/°C   |
| Temperature Coefficient of Pmax           | -0.35%/°C   |

**PERMISSIBLE OPERATING CONDITIONS**

|                         |                |
|-------------------------|----------------|
| Temperature Range       | -40°C to +85°C |
| Maximum System Voltage  | 1500 V DC      |
| Max. Series Fuse Rating | 30 A           |

**WARRANTY AND CERTIFICATIONS**

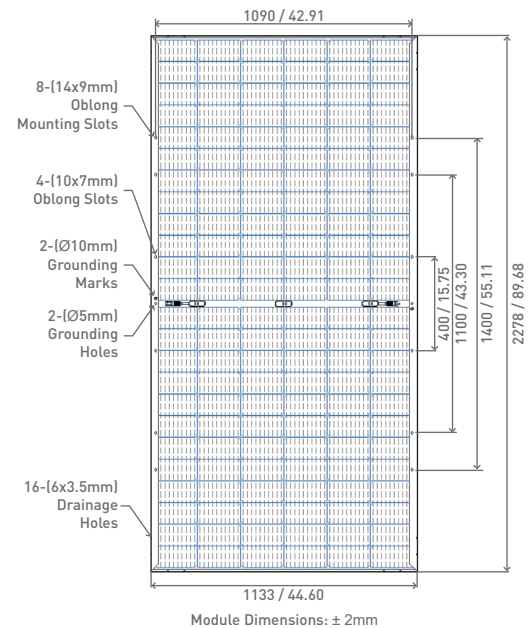
|                       |                                     |
|-----------------------|-------------------------------------|
| Product Warranty      | 12 years Product Warranty           |
| Performance Guarantee | 25 year Linear Performance Warranty |

**PACKAGING CONFIGURATION**

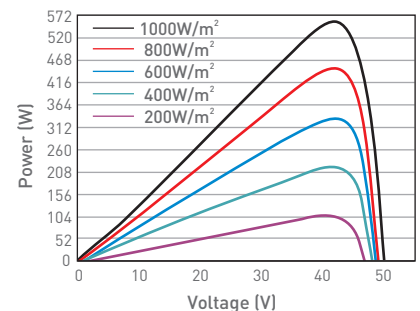
|                    |      |      |
|--------------------|------|------|
| Vehicle Type       | 32FT | 40FT |
| Module per Pallet  | 28   | 28   |
| Module per Vehicle | 504  | 616  |

\* Module Manufactured using Domestic (Make in India) Cells as per MNRE guidelines.

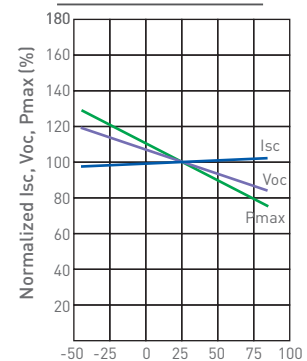
Dimension of PV Module  
Unit: mm / in



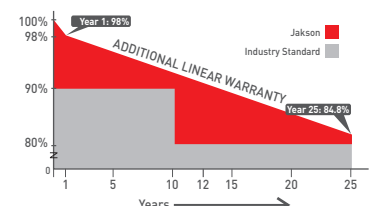
Power-Voltage Curve



Cell Temperature (°C)



Linear Performance Warranty



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Product specifications are subject to change without notice  
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