

## 144 CELL BIFACIAL

MONO PERC - MODULE

# 545-560WP



High Efficiency



Bifaciality Factor



Quality and Reliability



NDC



Rigorous Testing Criteria



Tough Build



144 Half Cell



Weight 28 KG



Up to +4.99 Wp  
Positive Tolerance

## Module Certified :

- ALMM
- IS 14286 : 2010 / IEC 61215 : 2005
- IS / IEC 61730 (Part 1 & 2) : 2004
- IEC 61701 (SALT MIST)
- IEC 62804 (PID) - 62804
- IEC 61853
- ISO (9001 : 2015) , (14001 : 2015 )
- Make in India

Cell Type  
**M10** Half Cut

Efficiency  
**21.55 %**

Product Warranty  
**12** Years

PERFORMANCE  
WARRANTY  
**27** Years

10BB



IP68 - Split Junction Box



## ELECTRICAL CHARACTERISTICS (STC) :

| Module Type                 |    | JSD -24545        | JSD -24550 | JSD -24555 | JSD -24560 |
|-----------------------------|----|-------------------|------------|------------|------------|
| Maximum Power (Pmp)         | WP | 545               | 550        | 555        | 560        |
| Open Circuit Voltage (Voc)  | V  | 49.44             | 49.8       | 49.88      | 49.96      |
| Short Circuit Current (Isc) | A  | 13.83             | 13.98      | 14.17      | 14.32      |
| Maximum Power Voltage (Vmp) | V  | 41.96             | 42.1       | 42.14      | 42.18      |
| Maximum Power Current (Imp) | A  | 12.99             | 13.08      | 13.18      | 13.30      |
| Module Efficiency (nm)      | %  | 21.09             | 21.28      | 21.42      | 21.55      |
| Fill Factor                 |    | 80.12             | 80.19      | 80.24      | 80.27      |
| Power Tolerance             |    | (- 0 + 5 W upto ) |            |            |            |
| Maximum System Voltage      |    | 1500 VDC          |            |            |            |
| Maximum Series Fuse Rating  |    | 25A               |            |            |            |

- Under Standard Test Conditions (STC) of irradiance 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.
- Except Pmax other parameters have a tolerance of  $\pm 3\%$ ,

## BIFACIAL OUTPUT-REAR SIDE POWER GAIN :

|      |                           |       |       |       |       |
|------|---------------------------|-------|-------|-------|-------|
| 5 %  | Maximum Power (Pmp)       | 572   | 577   | 582   | 588   |
|      | Module Efficiency STC (%) | 22.15 | 22.35 | 22.55 | 22.76 |
| 15 % | Maximum Power (Pmp)       | 626   | 632   | 638   | 644   |
|      | Module Efficiency STC (%) | 24.26 | 24.48 | 24.7  | 24.92 |
| 25 % | Maximum Power (Pmp)       | 681   | 687   | 693   | 700   |
|      | Module Efficiency STC (%) | 26.37 | 26.61 | 26.82 | 27.09 |

- Additional Power Gain from rear side is depends on albedo. (Higher albedo, the higher power gain.)

## ELECTRICAL PARAMETER AT NOCT :

|           |        |        |        |        |
|-----------|--------|--------|--------|--------|
| Power (W) | 405.48 | 409.34 | 411.81 | 413.29 |
| VMP (V)   | 38.15  | 38.8   | 38.85  | 38.88  |
| Imp (A)   | 10.50  | 10.55  | 10.60  | 10.63  |
| Voc (V)   | 46.01  | 46.05  | 46.09  | 46.12  |
| Isc (A)   | 11     | 11.08  | 11.16  | 11.19  |

- NOCT irradiance 800 W/m<sup>2</sup>, ambient temperature 20°C, wind speed 1 m/sec

## PACKING DETAILS :

| DETAILS                       | DOMESTIC |      | EXPORT |        |       |
|-------------------------------|----------|------|--------|--------|-------|
| Truck / Container             | 19FT     | 22FT | 40FT   | 20' GP | 40'GP |
| Pieces Per Pallet             | 28       | 28   | 28     | 31     | 31    |
| Pallets Per Truck / Container | 8        | 12   | 22     | 8      | 18    |
| Total No. of Panel            | 224      | 336  | 616    | 248    | 558   |

## WARRANTY :

|                      |                                                                                                      |
|----------------------|------------------------------------------------------------------------------------------------------|
| Product warranty     | 12 years                                                                                             |
| Performance warranty | 27 years Linear Power Warranty for with 2% for 1st Year degradation and 0.55% from year 2 to year 27 |

\*\*applicable only when module installation done as per joint solar installation manual

\*\*The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the ongoing innovation and product enhancement, joint Solar reserves the right to make necessary adjustment to the information described herein at any time without further notice.

## MECHANICAL SPECIFICATION

| Specification     | Details                                                                     |
|-------------------|-----------------------------------------------------------------------------|
| Solar cells       | Monocrystalline Silicon(PERC), Bi facial MBB<br>Non DCR and DCR - 144 Cells |
| Encapsulation     | Ultra - clear PID free EVA (Ethylene-Vinyl-Acetate)                         |
| Back sheet        | UV protected Transparent back sheet                                         |
| Frame             | Anodized Aluminium Alloy, T6 6063 Grade                                     |
| Front glass       | 3.2 mm, High Transmittance, ARC Tempered Glass                              |
| Dimensions        | (L) 2278mm * (W) 1134mm * (H) 35mm                                          |
| Weight            | 28 -29 kg                                                                   |
| Junction box      | IP 68 certified split JB with 25A by pass diodes                            |
| Cable             | 4.0 mm <sup>2</sup> (-) 350mm and (+) 350 mm in Length                      |
| Connectors        | Compatible with MC4 connectors                                              |
| Application Class | Class A                                                                     |
| Electrical Safety | Class II                                                                    |
| Fire Safety       | Class C ( Type 1)                                                           |
| Surface load      | Snow load 5400 Pa, wind load 2400 Pa                                        |

## TEMPERATURE CHARACTERISTICS :

|                              |              |
|------------------------------|--------------|
| Pmax Temperature Coefficient | - 0.32% / °C |
| Voc Temperature Coefficient  | - 0.25% / °C |
| ISC Temperature Coefficient  | + 0.05% / °C |
| Operating Temperature</      |              |