



# NIRSUN

N-TYPE TOPCON 16BB **570 Wp - 595 Wp** 

BIFACIAL(GLASS TO BACK SHEET)



12 Years Product Warranty
On Materials And Workmanship\*





Extra Power/High Saving



Extra Life With Up to 30% Additional Power



Double-Sided
Power Generation



Excellent anti-LeTID & anti-PID performance



Lower temperature coefficient



Lower LCOE & system cost

## **PRODUCT | CERTIFICATES**

IS 14286, IEC: 61215, 61730-1 & 11, 62804, 61583, 61701, 62716

Quality Management System: ISO 9001:2015

Environment Management System: ISO 14001: 2015 Occupational Health and Safety: ISO 45001:2018



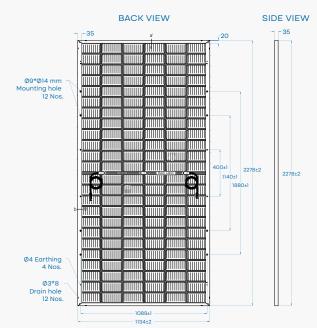
## TECHNICAL DATA



| ELECTRICAL CHARACTERISTICS*     | SEPLT16B144-570 |       | SEPLT16B144-575 |       | SEPLT16B144-580 |       | SEPLT16B144-585 |       | SEPLT16B144-590 |       | SEPLT16B144-595 |       |
|---------------------------------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
|                                 | STC             | NOCT  |
|                                 |                 |       |                 |       |                 |       |                 |       |                 |       |                 |       |
| Nominal Maximum Power (Pmax)    | 570             | 424   | 575             | 428   | 580             | 431   | 585             | 435   | 590             | 439   | 595             | 443   |
| Optimum Operating Voltage (Vmp) | 44.25           | 40.74 | 44.38           | 40.86 | 44.51           | 40.98 | 44.64           | 41.10 | 44.77           | 41.22 | 44.90           | 41.34 |
| Optimum Operating Current (Imp) | 12.89           | 10.41 | 12.96           | 10.47 | 13.03           | 10.52 | 13.11           | 10.59 | 13.18           | 10.64 | 13.26           | 10.71 |
| Open Circuit Voltage (Voc)      | 51.55           | 47.47 | 51.68           | 47.59 | 51.81           | 47.71 | 51.94           | 47.83 | 52.07           | 47.95 | 52.20           | 48.07 |
| Short Ciruit Current (Isc)      | 13.85           | 11.18 | 13.92           | 11.24 | 13.99           | 11.30 | 14.06           | 11.35 | 14.13           | 11.41 | 14.20           | 11.47 |
| Module Efficiency               | 22.08%          |       | 22.27%          |       | 22.45%          |       | 22.65%          |       | 22.84%          |       | 23.05%          |       |

**Guaranteed Power** 

85%

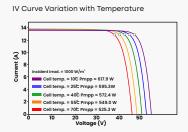


# LINEAR PERFORMANCE WARRANTY 100%-99% 87.4%

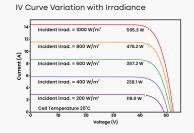
20

15 12 Year Mfg. Warranty, 30 Years Performance Warranty

10



Years



25

IV Curves for Front-Side Illumination of 595 Wp Panel

#### BIFACIAL OUTPUT - BACKSIDE POWER GAIN @ STC\* [Bifaciality Factor: 80% ± 10%]

[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]

| 5%  | Capacity rating - Pmax(Wp) Rated Voltage - Vmp(V) Rated Current - Imp(A) Open Circuit Voltage - Voc(V) Short Ciruit Current - Isc(A) Module Efficiency (%) | 599<br>44.25<br>13.53<br>51.55<br>14.54<br>23.18% | 604<br>44.38<br>13.61<br>51.68<br>14.62<br>23.38% | 609<br>44.51<br>13.68<br>51.81<br>14.69<br>23.58% | 614<br>44.64<br>13.77<br>51.94<br>14.76<br>23.79% | 620<br>44.77<br>13.84<br>52.07<br>14.84<br>23.98% | 625<br>44.90<br>13.92<br>52.20<br>14.91<br>24.20% |
|-----|--|---|---|---|---|---|---|
| 10% | Capacity rating - Pmax(Wp) Rated Voltage - Vmp(V) Rated Current - Imp(A) Open Circuit Voltage - Voc(V) Short Ciruit Current - Isc(A) Module Efficiency (%) | 627<br>44.25<br>14.18<br>51.55<br>15.24<br>24.29% | 633<br>44.38<br>14.26<br>51.68<br>15.31<br>24.49% | 638<br>44.51<br>14.34<br>51.81<br>15.39<br>24.70% | 644<br>44.64<br>14.42<br>51.94<br>15.47<br>24.92% | 649<br>44.77<br>14.50<br>52.07<br>15.54<br>25.13% | 655<br>44.90<br>14.59<br>52.20<br>15.62<br>25.35% |

### **MECHANICAL SPECIFICATIONS**

Dimensions 2278(L) x 1134(W) x 35(T)

Weiaht(ka) 28kg

Cell type / No Of Cell 144 Half-cut N-type TOPCon Bifacial Solar cells

Frame Anodized Aluminum Alloy (6005, Temper T6, Silver colour) Front Cover Low Iron semi-Tempered AR coated Glass (3.2 mm thick )

Encapsulate PID resistant and UV resistant Polymeric Film Back Cover PVDF base UV protected backsheet

Junction Box 30A Split Junction Box (3 nos. with individual Bypass Diode) – Weatherproof (IP68) 60 A, 45 V, 200  $^{\circ}$ C max. junction temperature

Bypass Diode

Cable 4 sq. mm, 300 mm length (Customised cable length available on request)

Connectors Mc4 Type Application Class Rating Class A Safety Class Ratina Class II

Mechanical Load Test 5400 Pa-Front; 2400 Pa-Back (as per IEC & UL)

Mounting Holes Pitch (Y)-mm [A] 1880, [B] 1140,

(Holes at 400 mm Y-pitch for tracker can be provided on customer request) Mounting Holes Pitch (X)-mm

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty: < ±3%. Average value of NOCT: 45.00 ± 2 °C]

| Operating Temperature:            | -40°C to +85°C          |      |      |  |  |
|-----------------------------------|-------------------------|------|------|--|--|
| Maximum System Voltage:           | 1500V                   |      |      |  |  |
| Maximum Series Fuse Rating:       | 30 A                    |      |      |  |  |
| TEMPERATURE COEFFI                | CIENTS                  | S    |      |  |  |
| Current α (Isc) :                 | 0.0471%/Ċ               |      |      |  |  |
| Voltage β (Voc) :                 | -0.3021%/Ċ              |      |      |  |  |
| Power Y (Pmax) :                  | -0.3315%/Ċ              |      |      |  |  |
| PACKING STANDARD                  | 19FT                    | 20FT | 40FT |  |  |
| No. of Modules per Container:     | 224                     | 280  | 616  |  |  |
| No. of Pallets per Container:     | 08                      | 10   | 22   |  |  |
| No. of Modules per Pallet/Weight: | 28 Nos/835 Kg           |      |      |  |  |
| Pallet Dimensions in mm :         | 2290(L)*1000(W)*1227(H) |      |      |  |  |

**MAXIMUM OPERATING CONDITIONS** 

Caution: Please read safety and installation instructions before using the product. \*Warranty: Linear performance warranty for 30 years, with degradation up to 1% in 1st year and 0.4 %/year from year 2 to year 30. Please réad SUNBOND warranty documents thoroughly. Disclaimer: Specifcations included in the datasheet are subject to change without prior notice owing to continuous innovation in the Product Development and R&D Activities. SUNBOND ENERGY PVT.LTD. reserves the right to make any adjustment to the information described here. Dataset contained in this specification do not form a representative of a single module data. @T&C Apply.