



# NiRSUN

SERIES

N-TYPE TOPCON 16BB

**570 Wp - 595 Wp**

BIFACIAL (GLASS TO BACK SHEET)



12 Years Product Warranty  
On Materials And Workmanship\*



30 Years Warranty for  
Linear Performance\*



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



**BACK VIEW**

Dimensions: 35, 20, 400±1, 2278±2, 1140±1, 1880±1, 1089±1, 10±0.5.

Mounting: Ø9\*Ø14 mm Mounting hole 12 Nos.

Earthing: Ø4 Earthing 4 Nos.

Drain hole: Ø3\*8 Drain hole 12 Nos.

**SIDE VIEW**

Dimensions: 35, 2278±2.

**LINEAR PERFORMANCE WARRANTY**

Guaranteed Power vs. Years

Years	Guaranteed Power (%)
0	99%
30	87.4%

12 Year Mfg. Warranty, 30 Years Performance Warranty

**IV Curve Variation with Temperature**

Incident Irrad. = 1000 W/m<sup>2</sup>

Cell Temp.	Pmpp	Power
10°C	617.9 W	595.3 W
25°C	595.3 W	-
40°C	572.4 W	-
55°C	549.0 W	-
70°C	525.3 W	-

**IV Curve Variation with Irradiance**

Cell Temperature 25°C

Incident Irrad.	Power
1000 W/m <sup>2</sup>	595.3 W
800 W/m <sup>2</sup>	476.2 W
600 W/m <sup>2</sup>	357.2 W
400 W/m <sup>2</sup>	238.1 W
200 W/m <sup>2</sup>	119.0 W

IV Curves for Front-Side Illumination of 595 Wp Panel

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

MECHANICAL SPECIFICATIONS	
Dimensions	2278(L) x 1134(W) x 35(T)
Weight(kg)	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)
Bypass Diode	60 A, 45 V, 200 °C max. junction temperature
Cable	4 sq. mm, 300 mm length (Customised cable length available on request)
Connectors	Mc4 Type
Application Class Rating	Class A
Safety Class Rating	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	1089

MAXIMUM OPERATING CONDITIONS			
Operating Temperature:	-40°C to +85°C		
Maximum System Voltage:	1500V		
Maximum Series Fuse Rating:	30 A		
TEMPERATURE COEFFICIENTS			
Current α (Isc) :	0.0471%/°C		
Voltage β (Voc) :	-0.3021%/°C		
Power γ (Pmax) :	-0.3315%/°C		
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)		

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

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 read SUNBOND warranty documents thoroughly. Disclaimer: Specifications 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.