



Switch to SOLAR for
a Brighter Tomorrow

Key Features



Higher power output
with N-Type cells.



Guaranteed consistent
performance.



Better energy in
low-light conditions.



Improved high-temp
energy yield ($-0.30\%/^{\circ}\text{C}$).



Up to 23.12% efficiency,
10-30% higher than P-type.



Enhanced performance with
MBB (16BB) N-TOPCon design.



Durable under 2400 Pa
wind and 5400 Pa snow load.



100% defect-free
through rigorous testing.



Increased energy
with $80\pm 5\%$ bifaciality.

Omega Series

N-TOPCon

580/600/610/620/
630/640Wp

Warranty



Product Warranty: 12 Years: Materials & Workmanship
Linear Performance Warranty: 30 Years
First Year Degradation: Up to 1.0%
Annual Degradation (Years 2-30): 0.40%

Certifications



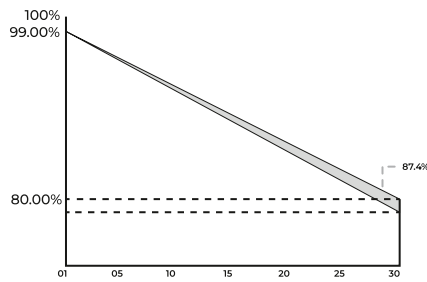
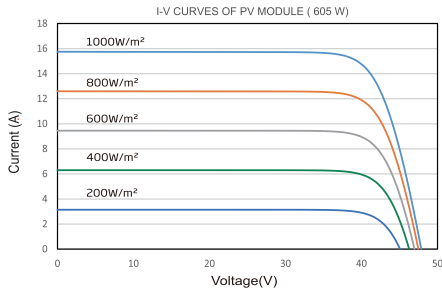
IEC 61215 || - BIS, IEC 61730 || - BIS

IEC 61701 || - Salt Mist, IS 14286 || - BIS

IEC 62716 || - Ammonia, IEC 62804 || - PID

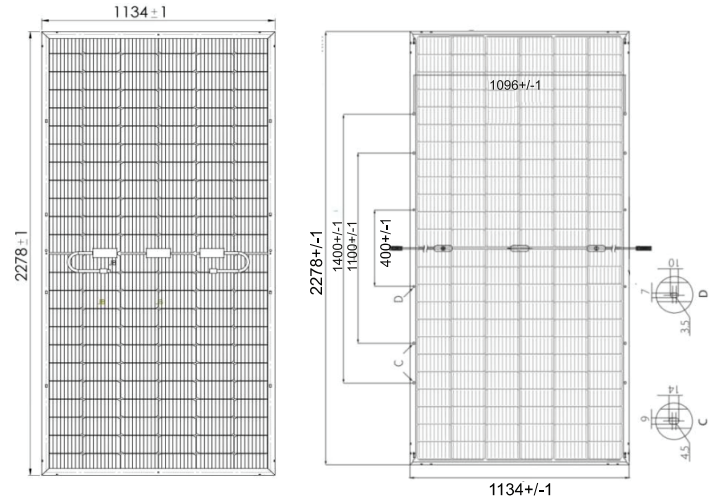
IEC 61853 || - Irradiance and temperature

I-V Characteristics At Different Irr



MODULE MECHANICAL DATA SPECIFICATION DATA

Cell Type	N-TOPCon, 132 Cells
Dimensions	2382x1134x30 mm
Weight	33.5 Kgs
Front Cover	2.00 mm
Rear Cover	2.00 mm
Frame Material	"Silver Anodized Aluminum Profile,
J-Box	IP68, 3 diodes
Cable	350 mm, 4 mm²
Connectors	Mc4 Compatible Connector



- The specifications included in this datasheet are subject to change without notice.
- The electrical data given here is for reference purpose only.
- Please confirm your exact requirements with the sales representative while placing your order.
- Refer installation Manual instructions & IB Solar warranty statement for terms & conditions.

ELECTRICAL DATA PERFORMANCE

MODULE TYPE		580		600		610		620		630		640			
CONDITIONS	UNIT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT		
Peak Power, Pmax (Wp)	W	580	436	600	451	610	458	620	466	630	477.5	640	483.20		
Voltage at Maximum power, Vmp	(V)	42.94	39.98	40.11	38.02	40.51	38.40	40.91	38.78	35.98	33.71	48.01	44.75		
Current at Maximum power, Imp	(A)	13.51	10.91	14.96	11.87	15.01	11.94	15.16	12.02	17.51	14.11	13.33	10.77		
Open Circuit Voltage, Voc	(V)	51.41	48.74	47.98	45.29	48.38	45.86	48.78	46.24	43.14	41.20	57.33	54.46		
Short Circuit Current, Isc	(A)	14.19	11.46	15.85	12.80	15.95	12.88	16.05	12.96	18.51	14.92	14.05	11.34		
Module Efficiency (%)		22.45 %		22.19%		22.56 %		22.93 %		22.09 %		22.90 %			
Operating Temperature (°c)		-40°C~+85°C				Temperature coef cient of Current Isc (A)						+0.046%/°C			
Maximum system voltage		1500 VDC				Nominal operating cell temperature						45±2°C			
Maximum series fuse rating		35A				Fire Safety						Class-C			
Power tolerane (Wp)		0~+3%				Protection Class II						Class-A			
Temperature coefficient of Pmax (Y)		0~-0.30%/°C				Safety Class						Class-II			
Temperature coefficient of Voc (B)		0~-0.26%/°C													

STC: Irradiance 1000W/m², module temperature 25°C, AM =1.5; NOCT: Irradiance 800W/m², ambient temperature 20°C, AM=1.5, wind Speed 1m/s. Average power reduction of 4.5% at 200W/m² as per IEC 60904-1. Except Pmax, all other parameters have tolerance of +/-5%, measurement uncertainty +/-3%.

BI-FACIAL OUTPUT - BACKSIDE POWER GAIN*

BIFACIAL GAIN	MEASUREMENT	UNIT	580	600	610	620	630	640
5%	Peak Power (Pmax)	W	609	630	671	701	750	762
	Module Efficiency	%	21.79	22.54	25.57	25.09	25.63	26.73
10%	Peak Power (Pmax)	W	667	690	732	759	787	801
	Module Efficiency	%	23.86	24.68	25.67	25.94	26.63	26.73
15%	Peak Power (Pmax)	W	725	750	702	725	762	832
	Module Efficiency	%	25.94	26.83	26.09	26.53	26.73	27.73

*Power gain from the rear side depends on the ground reflectance (Albedo) & Bifaciality factor.

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