SUNOVA SOLAR
Pv Tech Expert.
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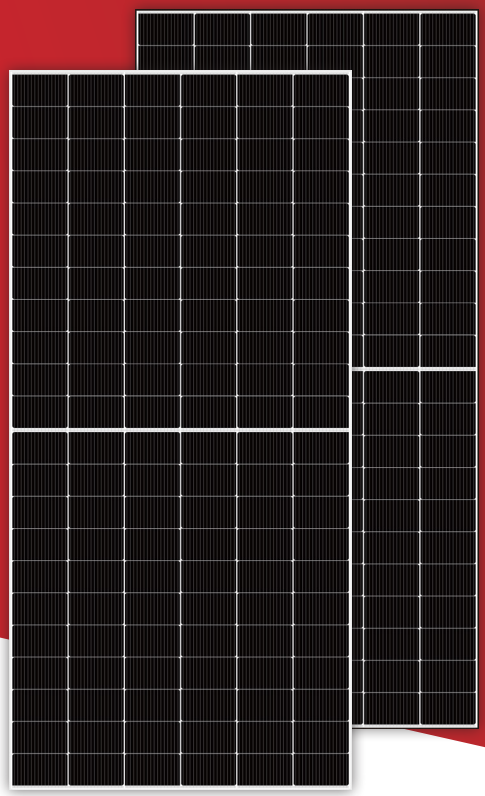
Tangra™ L Pro HD

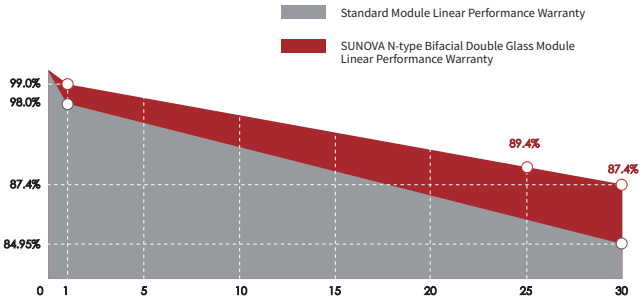
595-615W

N-type TOPCon High Density Bifacial Double Glass Mono Module



- Bifacial technology enables additional energy harvesting from rear side (up to 30%)
- 30-year lifespan delivers 10-30% more power compared with conventional P-type modules
- LID — The natural lack of LID in the N-type solar cell can increase power generation
- Excellent low irradiance performance
- Better light trapping and current collection to improve module power output and reliability
- Industry-leading, lowest thermal coefficient
- Optimized electrical design and lower operating current for reduced hot spot loss and better temperature
- 2400Pa/5400Pa — Certified to withstand 2400 Pa of wind load and 5400 Pa of snow load
- 100% triple EL test, which greatly reduces the hidden cracks rate

LINEAR PERFORMANCE WARRANTY



15 years — Product quality & process guarantee

30 years — Linear power guarantee

0.40% — Annual degradation

PERFORMANCE INSURANCE

Ariel Re · LLOYD'S Underwriters · Munich RE · 中国平安 PING AN P&C INSURANCE CO CN SZN

* Optional performance warranty insurance. Please contact our local sales representatives for more information.

COMPREHENSIVE CERTIFICATES

TÜV NORD · CE · INMETRO

ISO 9001: Quality Management System
ISO 14001: Environmental Management System Standard
ISO 45001: International Occupational Health and Safety Assessment System Standard
SA 8000: 2014 Social Accountability Management System

* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

ELECTRICAL CHARACTERISTICS

132 cells

Model of modules	SS-BG595-66MDH-G11(T)		SS-BG600-66MDH-G11(T)		SS-BG605-66MDH-G11(T)		SS-BG610-66MDH-G11(T)		SS-BG615-66MDH-G11(T)	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	595	454	600	459	605	462	610	466	615	470
Open-circuit voltage — V_{oc} (V)	48.10	45.70	48.40	46.00	48.70	46.20	49.00	46.50	49.30	46.80
Short-circuit current — I_{sc} (A)	15.76	12.69	15.80	12.73	15.83	12.75	15.86	12.78	15.89	12.81
Maximum power voltage — V_{mp} (V)	40.00	37.60	40.30	37.90	40.50	38.10	40.80	38.30	41.00	38.60
Maximum power current — I_{mp} (A)	14.89	12.07	14.91	12.11	14.94	12.13	14.96	12.16	14.99	12.18
Module efficiency — η_m (%)	22.0		22.2		22.4		22.6		22.8	

STC (Standard Testing Conditions): Irradiance 1000W/m^2, Cell Temperature 25 °C , Spectra at AM1.5
NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m^2, Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 13.5% IRRADIANCE RATIO)

Peak Power (P_{max}) (W)	660	666	670	676	681
Open Circuit Voltage (V_{oc}) (V)	48.10	48.40	48.70	49.00	49.30
Short Circuit Current (I_{sc}) (A)	17.46	17.51	17.54	17.57	17.61
MPP Voltage (V_{mp}) (V)	40.00	40.30	40.50	40.80	41.00
MPP Current (I_{mp}) (A)	16.50	16.52	16.55	16.58	16.61

STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	2382x 1134 x 30 mm
Weight	32.5 kg
Cell	132 cells, N-type TOPCon monocrystalline
Front glass	2.0 mm, Anti-Reflection Coating
Back glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized aluminum alloy (Silver/Black)
Junction box	IP68, 3 diodes
Output wire	4.0 mm^2
Wire length	300mm/1200mm/customized
Connector	MC4 Compatible
Packing Specification	36pcs/Pallet; 720 pcs/40'HQ

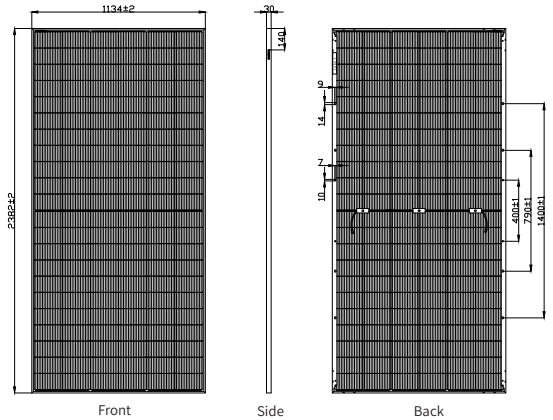
OPERATING PARAMETERS

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85 °C
Mechanical load	5400 Pa / 2400 Pa

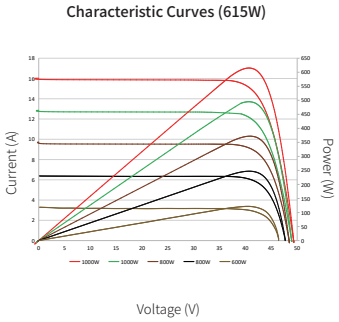
TEMPERATURE RATINGS

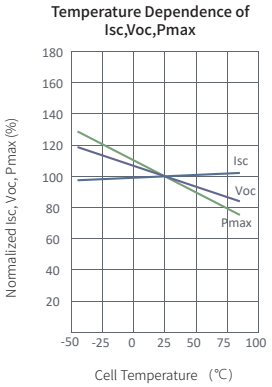
Temperature coefficient (P_{max})	-0.30 %/°C
Temperature coefficient (V_{oc})	-0.28 %/°C
Temperature coefficient (I_{sc})	+0.04 %/°C
Nominal operating cell temperature	43±2 °C

MODULE DIMENSIONS (MM)



* The unmarked tolerance is ±1 mm
Length shown in mm





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