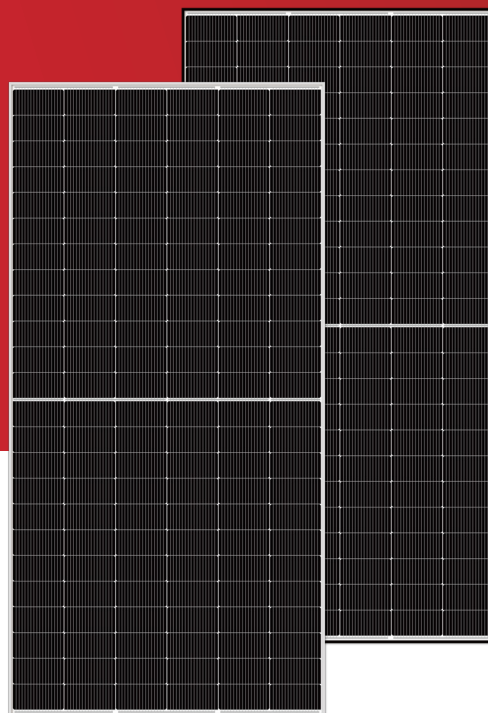# Tangra™ M
565-585W

N-type high efficiency half-cell mono module

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
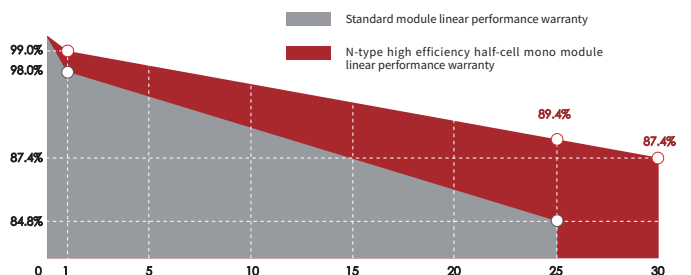
2400Pa/5400Pa Certified to withstand 2400 Pa of wind load and 5400 Pa of snow load

100% triple EL test, which greatly reduces the hidden cracks rate

LINEAR PERFORMANCE WARRANTY

Standard module linear performance warranty

N-type high efficiency half-cell mono module linear performance warranty

99.0%
98.0%
89.4%
87.4%
87.4%
84.8%

0 1 5 10 15 20 25 30

15 years
Product quality & process guarantee

30 years
Linear power guarantee

0.40 %
Annual degradation

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
SA8000: 2014 Social Accountability Management System

WARRANTY 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 staff for more information.

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

ELECTRICAL CHARACTERISTICS

Model of modules	SS-565-72MDH(T)		SS-570-72MDH(T)		SS-575-72MDH(T)		SS-580-72MDH(T)		SS-585-72MDH(T)	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	565	421	570	425	575	428	580	432	585	436
Open-circuit voltage — V_{oc} (V)	51.45	48.57	51.60	48.71	51.75	48.85	51.90	48.99	52.09	49.17
Short-circuit current — I_{sc} (A)	13.46	10.87	13.51	10.92	13.56	10.96	13.61	11.00	13.68	11.05
Maximum power voltage — V_{mp} (V)	44.10	41.28	44.23	41.41	44.35	41.52	44.48	41.64	44.61	41.76
Maximum power current — I_{mp} (A)	12.81	10.19	12.89	10.26	12.96	10.31	13.04	10.38	13.12	10.44
Module efficiency — η_m (%)	21.9		22.1		22.3		22.5		22.6	
Power tolerance (W)	(0,+5)									
Maximum system voltage (V)	1500									
Maximum rated fuse current (A)	25									
Current operating temperature (°C)	-40~+85 °C									

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C , Spectra at AM1.5
NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

STRUCTURAL CHARACTERISTICS

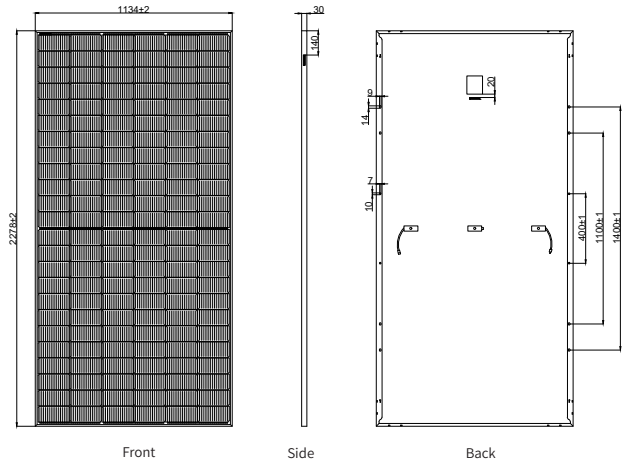|	
Module dimensions (L*W*H)	2278 x 1134 x 30 mm
Weight	27.2 kg
Number of cells	144 cells
Cell	N-type monocrystalline
Glass	Tempered, 3.2 mm AR, high transmittance, low iron
Frame	Anodized aluminum alloy (Silver/Black)
Junction box	IP68, 3 bypass diodes
Output wire	4.0 mm², wire length: 300mm/1200mm/customized
Connector	MC4 Compatible
Mechanical load	Snow load: 5400 Pa ❄ Wind load: 2400 Pa 〰

TEMPERATURE PERFORMANCE RATINGS

TANGRA temperature coefficient (P_{max})	-0.30 %/°C
Temperature coefficient (V_{oc})	-0.28 %/°C
Temperature coefficient (I_{sc})	+0.045 %/°C
Nominal operating cell temperature	43±2 °C

PACKAGING CONFIGURATION

Container	40HQ
Quantity/pallet	36
Pallets/container	20
Quantity/container	720

MODULE DIMENSIONS (MM)

Front   Side   Back

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

Current-Voltage & Power-Voltage Curves (580W)

Temperature Dependence of Isc,Voc,Pmax

THORNOVA SOLAR   **SUNOVA SOLAR**

Make it happen !