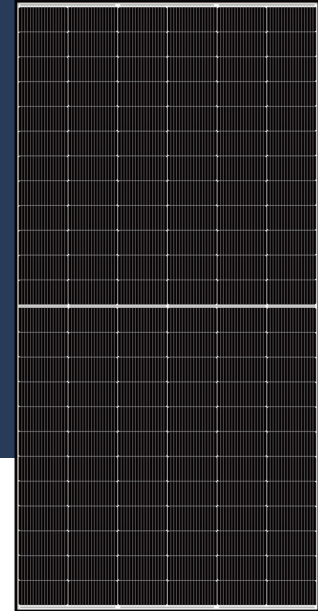


Tangra™ M C 580-600W

Composite Frame

N-Type High efficiency Monofacial Single Glass Module



*Frame: Multiple colors available



30-year lifespan delivers 10-30% more power compared with conventional P-type modules



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



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



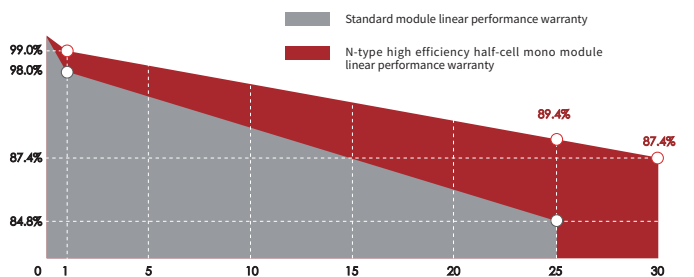
100% triple EL test, which greatly reduces the hidden cracks rate

WARRANTY INSURANCE



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

LINEAR PERFORMANCE WARRANTY



15 years

Product quality & process guarantee

30 years

Linear power guarantee

0.40 %

Annual degradation

COMPREHENSIVE CERTIFICATES



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

* 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	TS-SWT72(580)		TS-SWT72(585)		TS-SWT72(590)		TS-SWT72(595)		TS-SWT72(600)	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power — P_{mp} (W)	580	432	585	436	590	440	595	443	600	447
Open-circuit voltage — V_{oc} (V)	51.90	48.99	52.09	49.17	52.28	49.35	52.47	49.53	52.66	49.71
Short-circuit current — I_{sc} (A)	13.61	11.00	13.68	11.05	13.75	11.10	13.82	11.15	13.89	11.20
Maximum power voltage — V_{mp} (V)	44.48	41.64	44.61	41.76	44.73	41.88	44.85	42.00	44.97	42.12
Maximum power current — I_{mp} (A)	13.04	10.38	13.12	10.44	13.20	10.50	13.28	10.56	13.36	10.62
Module efficiency — η_m (%)	22.5		22.6		22.8		23.0		23.2	
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

NMOT (Nominal Module Operating 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±1kg
Number of cells	144 cells
Cell	N-type monocrystalline
Glass	Tempered, 3.2 mm AR, high transmittance, low iron
Frame	Black GFRP(Glass Fiber Reinforced Polymer) (Multiple colors available)
Junction box	IP68, 3 bypass diodes
Output wire	4.0 mm ² , wire length: 300mm/1200mm/customized
Connector	MC4 Compatible
Mechanical load	Snow load: 5400 Pa */ Wind load: 2400 Pa ☼

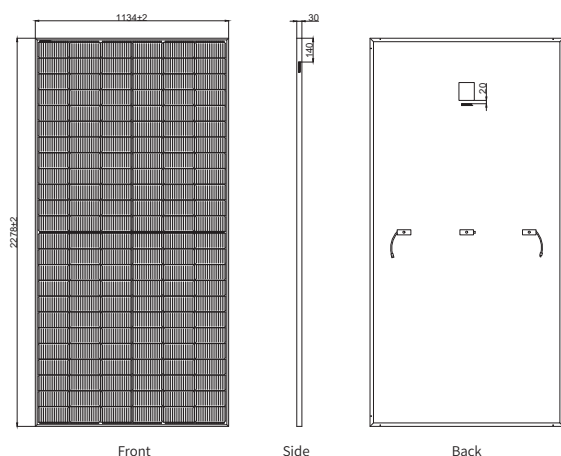
TEMPERATURE PERFORMANCE RATINGS

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

PACKAGING CONFIGURATION

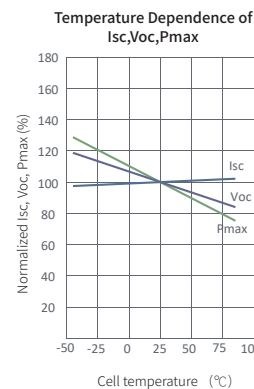
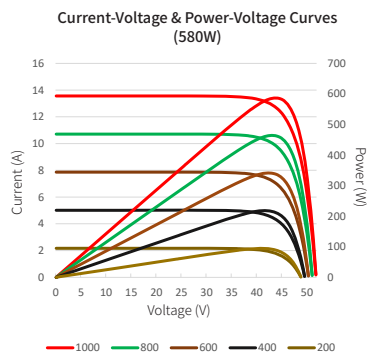
Container	40HQ
Quantity/pallet	36
Pallets/container	20
Quantity/container	720

MODULE DIMENSIONS (MM)



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

* For clamp mounting only



Scan the QR code to get more information

Web: www.thornovasolar.com

E-mail: info@thornovasolar.com

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