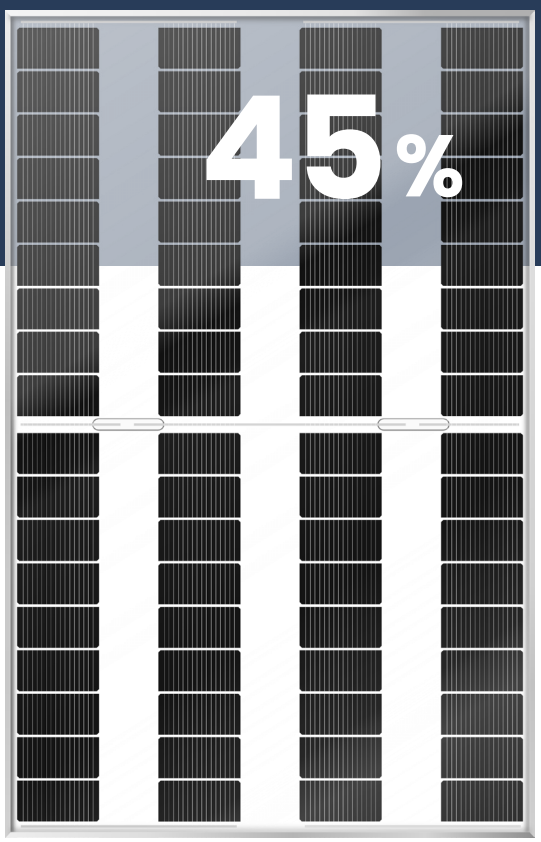
THORNOVA solar | TIER 1 BloombergNEF

Tangra™ S Pro AgriPV 280-290W

N-Type High efficiency Bifacial Dual Glass Module



- Bifacial technology allows up to 30% additional energy harvesting from the rear side
- 30 years lifespan brings 10-30% more power generation 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

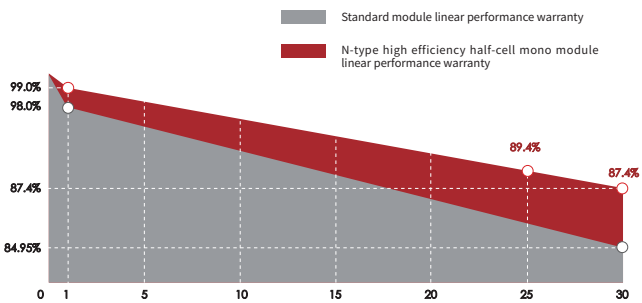
Warranty partner

Munich RE

PING AN P & C INSURANCE CO CN SZN

* 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

ELECTRICAL CHARACTERISTICS

72 cells

Model of modules	TS-BGT36(280)		TS-BGT36(285)		TS-BGT36(290))	
	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — P_{mp} (W)	280	211	285	214	290	219
Open-circuit voltage — V_{oc} (V)	25.05	23.65	25.38	23.96	25.51	24.08
Short-circuit current — I_{sc} (A)	13.93	11.25	14.00	11.31	14.08	11.38
Maximum power voltage — V_{mp} (V)	21.27	19.91	21.46	20.09	21.68	20.30
Maximum power current — I_{mp} (A)	13.16	10.59	13.26	10.67	13.38	10.77
Module efficiency — η_m (%)	14.5		14.7		15.0	

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)	310	315	321
Open circuit voltage (V_{oc}) (V)	25.05	25.38	25.51
Short circuit current (I_{sc}) (A)	15.43	15.51	15.60
MPP voltage — V_{mp} (V)	21.27	21.46	21.68
MPP current — I_{mp} (A)	14.58	14.69	14.83

STRUCTURAL CHARACTERISTICS

Module dimensions (L*W*H)	1722 x 1134 x 30 mm
Weight	24.2 kg
Cell	72 cells, N-type monocrystalline
Front glass	2.0mm, anti-reflection coating
Back glass	2.0mm, heat strengthened glass
Frame	Anodized aluminum alloy (Silver/Black)
Junction box	IP68, 2 bypass diodes
Output wire	4.0 mm^2
Wire length	300 mm or customized length
Connector	MC4 Compatible
Packaging specification	36 pcs/pallet; 936 pcs/40'HQ

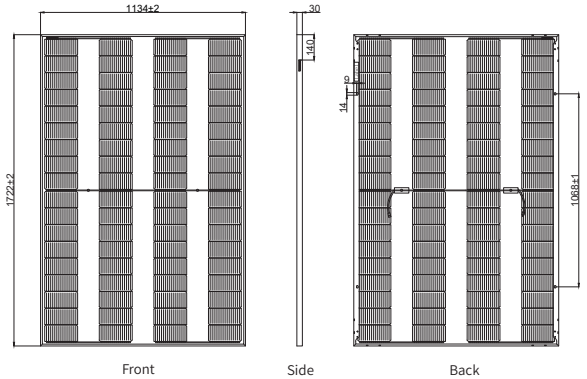
OPERATING PARAMETERS

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 ෴

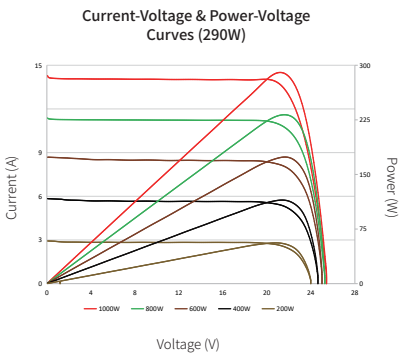
TEMPERATURE PERFORMANCE RATINGS

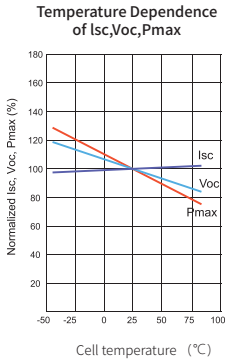
TANGRA temperature coefficient (P_{max})	-0.30 %/°C
Temperature coefficient (V_{oc})	-0.28 %/°C
Temperature coefficient (I_{sc})	+0.04 %/°C
Nominal operating cell temperature	43±2 °C

MODULE DIMENSIONS (MM)



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





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