THORNOVA solar | TIER 1 BloombergNEF

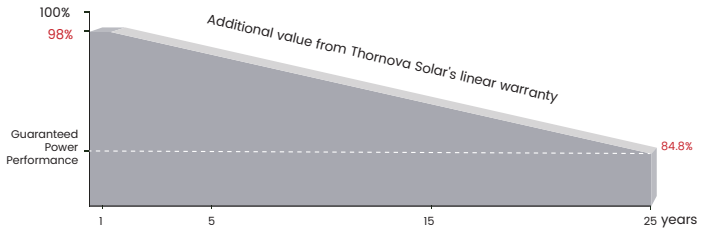
540–560 W

High efficiency bifacial single glass PERC module

TS-BB72

- Bifacial technology allows for the harvesting of up to an additional 25% energy from the rear side of the module.
- Excellent low irradiance performance.
- Enhanced light trapping and optimized current collection contribute to the improvement of both module power output and reliability.
- Industry leading lowest thermal coefficient of power.
- Design optimized for lower operating current, resulting in minimized hot spot loss and improved temperature coefficient.
- Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).
- 100% triple EL test enables remarkable reduction of module hidden crack rate.

LINEAR PERFORMANCE WARRANTY



15 years
Product quality & process guarantee

25 years
Linear power guarantee

0.55 %
Annual degradation Over 25 years

COMPREHENSIVE CERTIFICATES

Intertek

ISO 9001: Quality Management System
ISO 14001: Environmental Management System Standard
ISO 45001: International Occupational Health and Safety Assessment System Standard

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

RE INSURANCE

Munich RE

Ariel Re

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

ELECTRIC CHARACTERISTICS

2×72cells

Model of modules	TS-BB72(540)		TS-BB72(545)		TS-BB72(550)		TS-BB72(555)		TS-BB72(560)	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak power - P_{mp} (W)	540	402	545	406	550	410	555	414	560	417
Open circuit voltage - V_{oc} (V)	49.42	46.65	49.51	46.73	49.60	46.82	49.68	46.90	49.76	46.97
Short circuit current - I_{sc} (A)	13.85	11.19	13.94	11.26	14.04	11.34	14.13	11.42	14.25	11.51
MPP voltage - V_{mp} (V)	40.71	38.11	40.76	38.16	40.83	38.22	40.89	38.28	40.95	38.33
MPP current - I_{mp} (A)	13.27	10.56	13.38	10.65	13.48	10.73	13.58	10.81	13.68	10.89
Module efficiency - η_m (%)	20.9		21.1		21.3		21.5		21.7	

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

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

Peak power - P_{mp} (W)	591	597	602	608	613
Open circuit voltage - V_{oc} (V)	49.42	49.51	49.60	49.68	49.77
Short circuit current - I_{sc} (A)	15.16	15.26	15.37	15.44	15.54
MPP voltage - V_{mp} (V)	40.71	40.76	40.83	40.88	40.93
MPP current - I_{mp} (A)	14.52	14.64	14.75	14.86	14.98
Irradiance ratio (rear/front)	13.5 %				

STRUCTURAL CHARACTERISTICS

Module dimension (L*W*H)	2278 x 1134 x 35 mm (89.69 x 44.65 x 1.38 inch)
Weight	27.2 kg (59.97 lbs)
Number of cells	144 cells
Cell	PERC monocrystalline 182x91 mm (7.17 x 3.58 inch)
Glass	Tempered, 3.2 mm AR, High transmittance, Low iron
Backsheet	Transparent black mesh backsheet
Frame	Anodized aluminum alloy
Junction box	IP68
Output wire	4.0 mm²
Wire length	300 mm / 1200 mm / Customized length
Connector	MC4 - EVO2
Packing specification	31 pcs/Pallet; 620 pcs/40'HQ

OPERATING PARAMETERS

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (℃)	-40~+85 ℃
Bifaciality	70±5%

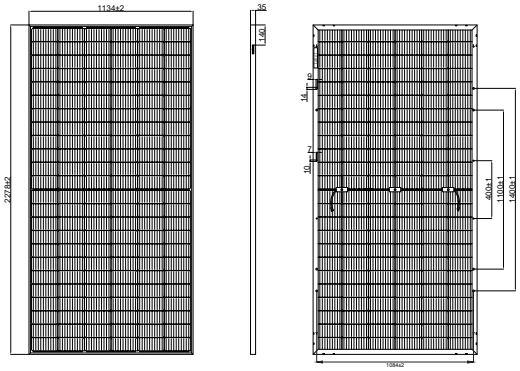
MECHANICAL LOADING

Front side maximum static loading (Pa)	5400
Rear side maximum static loading (Pa)	2400
Hailstone test (mm)	35

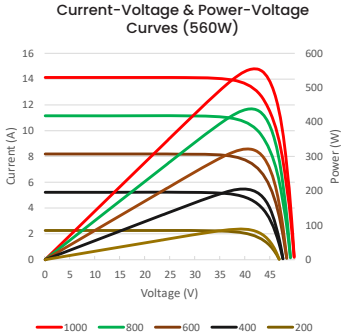
TEMPERATURE RATINGS

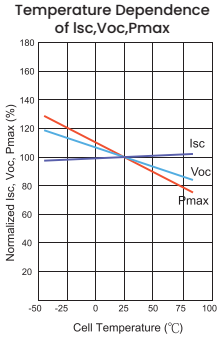
Temperature coefficient (P_{max})	-0.33 %/℃
Temperature coefficient (V_{oc})	-0.26 %/℃
Temperature coefficient (I_{sc})	+0.06 %/℃
Nominal operating cell temperature	45±2 ℃

MODULE DIMENSIONS (MM)



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





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