

# 545-560W

High Efficiency Bifacial Dual Glass PERC Module



Bifacial technology enables additional energy harvesting from the rear side (up to 30%).



Excellent low irradiance performance.



Better light trapping and current collection to improve module power output and reliability.



Industry leading lowest thermal coefficient of power.



Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.

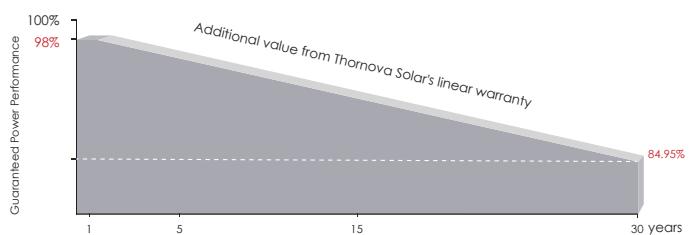


Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



100% triple EL test enables remarkable reduction of module hidden crack rate.

## LINEAR PERFORMANCE WARRANTY



**15** years

Product quality & process guarantee

**30** years

Linear power guarantee

**0.45** %

Annual Degradation Over 30 years

## COMPREHENSIVE CERTIFICATES

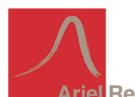


**ISO 9001:** Quality Management System

**ISO 14001:** Environmental Management System Standard

**ISO 45001:** International Occupational Health and Safety Assessment System Standard

## RE INSURANCE



## ELECTRIC CHARACTERISTICS

**144** cells

Model of modules	TS-BG72(545)		TS-BG72(550)		TS-BG72(555)		TS-BG72(560)	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power – $P_{mp}$ (W)	545	406	550	410	555	414	560	417
Open-circuit voltage – $V_{oc}$ (V)	49.51	46.74	49.60	46.82	49.68	46.93	49.76	46.97
Short-circuit current – $I_{sc}$ (A)	13.94	11.27	14.04	11.35	14.13	11.42	14.25	11.51
Maximum power voltage – $V_{mp}$ (V)	40.76	38.19	40.83	38.25	40.89	38.32	40.95	38.33
Maximum power current – $I_{mp}$ (A)	13.38	10.64	13.48	10.73	13.58	10.81	13.68	10.88
Module efficiency – $\eta_m$ (%)	21.1%		21.3%		21.5%		21.7%	

**STC** (Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 °C , Spectra at AM1.5

**NOCT** (Nominal Operating Cell Temperature): Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

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

Maximum power — $P_{mp}$ (W)	597	602	608	613
Open-circuit voltage — $V_{oc}$ (V)	49.51	49.60	49.68	49.76
Short-circuit current — $I_{sc}$ (A)	15.26	15.37	15.47	15.59
Maximum power voltage — $V_{mp}$ (V)	40.76	40.83	40.89	40.95
Maximum power current — $I_{mp}$ (A)	14.64	14.75	14.86	14.97
Irradiance ratio (rear/front)			13.5%	

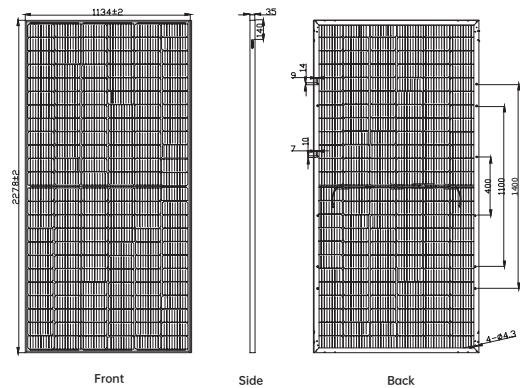
## **STRUCTURAL CHARACTERISTICS**

Module dimension (L*W*H)	2278 x 1134 x 35 mm (89.69 x 44.65 x 1.38 inch)
Weight	32.3 kg (71.21 lbs)
Number of cells	144 cells
Cell	PERC Monocrystalline 182x91 mm (7.17 x 3.58 inch)
Glass	(F)2.0mm, Anti-Reflection Coating (B)2.0mm, Heat Strengthened Glass
Frame	Anodized aluminum alloy
Junction box	IP68, 3 bypass diodes
Output wire	4.0 mm <sup>2</sup>
Wire length	300mm/customized
Connector	MC4 Compatible
Packing Specification	31 pcs/Pallet; 558 pcs/40'HQ

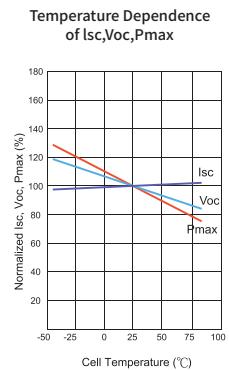
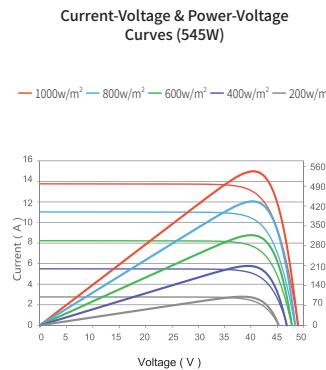
## OPERATING PARAMETERS

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
Bifaciality	70±5%
<b>TEMPERATURE RATINGS</b>	
Temperature coefficient ( $P_{max}$ )	-0.35% / °C
Temperature coefficient ( $V_{oc}$ )	-0.28 % / °C
Temperature coefficient ( $I_{sc}$ )	+0.04 % / °C
Nominal operating cell temperature	45±2 °C

## MODULE DIMENSIONS (MM)



\* The unmarked tolerance is  $\pm 1$  mm  
Length shown in mm



**THORNOVA** solar

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