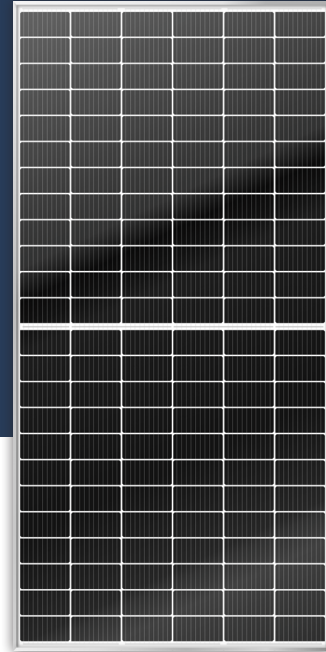




# Zosma™ M Pro

PERC High efficiency Bifacial Dual Glass Module

**TS-BG72(545-565)**



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.



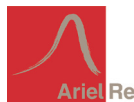
Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



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

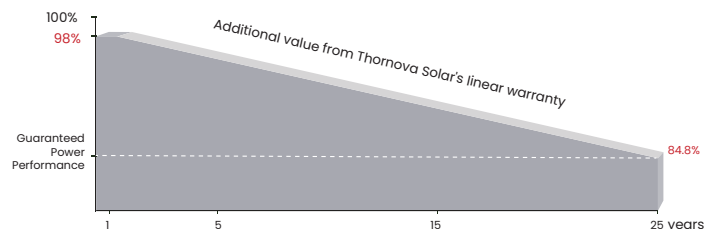
## RE INSURANCE

Warranty partner



\* 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

**0.45** %

Annual degradation Over 25 years

## COMPREHENSIVE CERTIFICATES



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.

## CARACTERÍSTICAS ELÉCTRICAS

Modelo del módulo	TS-BG72(545)		TS-BG72(550)		TS-BG72(555)		TS-BG72(560)		TS-BG72(565)	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Potencia máxima — $P_{mp}$ (W)	545	406	550	410	555	414	560	417	565	421
Tensión en circuito abierto — $V_{oc}$ (V)	49.51	46.73	49.60	46.82	49.68	46.90	49.76	46.97	49.84	47.04
Corriente de cortocircuito — $I_{sc}$ (A)	13.94	11.26	14.04	11.34	14.13	11.42	14.25	11.51	14.37	11.60
Tensión de potencia máxima — $V_{mp}$ (V)	40.76	38.16	40.83	38.22	40.89	38.28	40.95	38.33	41.01	38.38
Corriente de potencia máxima — $I_{mp}$ (A)	13.38	10.65	13.48	10.73	13.58	10.81	13.68	10.89	13.78	10.97
Eficiencia del módulo — $\eta_m$ (%)	21.1		21.3		21.5		21.7		21.9	

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

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

## GENERACIÓN DE POTENCIA DESDE LA PARTE TRASERA (TASA DE IRRADIANCIA: 13.5%)

Potencia de pico (Pmax) (W)	597	602	608	613	619
Tensión en circuito abierto ( $V_{oc}$ ) (V)	49.51	49.60	49.68	49.76	49.84
Corriente de cortocircuito ( $I_{sc}$ ) (A)	15.26	15.37	15.47	15.60	15.75
Tensión del MPP — $V_{mp}$ (V)	40.76	40.83	40.89	40.95	41.01
Corriente del MPP — $I_{mp}$ (A)	14.64	14.75	14.86	14.97	15.08

## CARACTERÍSTICAS ESTRUCTURALES

Dimensiones del módulo	89.69 x 44.65 x 1.38 inch (2278 x 1134 x 35 mm)
Peso	68.78 lbs (31.2 kg)
Número de celdas	144 celdas
Celda	PERC monocrystalline (M10)
Vidrio	2.0mm, recubrimiento antirreflejante (vidrio delantero) 2.0mm, vidrio termoendurecido (vidrio trasero)
Frame	Aleación de aluminio anodizado
Caja de conexión	IP68, 3 diodos de bypass
Cable de salida	4.0 mm <sup>2</sup>
Longitud del cable	300mm / 1200mm o personalizada
Conector	MC4 - EVO2
Especificaciones de embalaje	30 piezas/palet; 570 piezas/40'HQ

## PARÁMETROS DE FUNCIONAMIENTO

Tolerancia de potencia (W)	(0,+5)
Tensión máxima del sistema (V)	1500
Corriente nominal máxima del fusible (A)	30
Temperatura de funcionamiento actual (°C)	-40~+185 °F (-40~+85 °C)
Bifacialidad	70±5 %

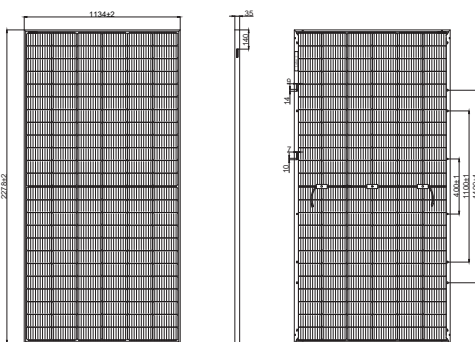
## CARGA MECÁNICA

Carga estática máxima en la parte delantera (Pa)	5400
Carga estática máxima en la parte trasera (Pa)	2400
Ensayo Hailstone (mm)	35

## TEMPERATURA CARACTERÍSTICAS

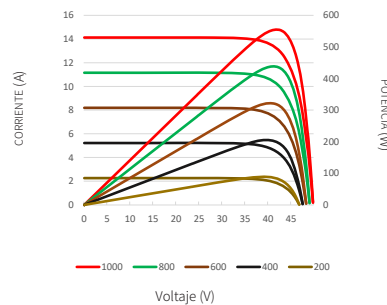
Coefficiente de temperatura ( $P_{max}$ )	-0.33 %/K
Coefficiente de temperatura ( $V_{oc}$ )	-0.26 %/K
Coefficiente de temperatura ( $I_{sc}$ )	+0.06 %/K
Temperatura operativa nominal del módulo	109.4±35.6 °F (43±2 °C)

## DIMENSIONES DEL MÓDULO (MM)

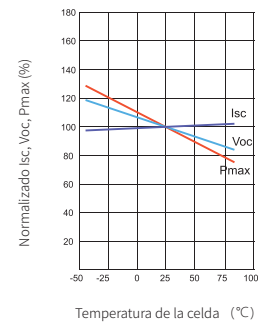


Parte Delantera Lateral Parte Trasera  
\* La tolerancia no marcada es de ±1 mm  
Longitud mostrada en mm

Curvas de corriente-voltaje y potencia-voltaje (560W)



Dependencia de temperatura de  $I_{sc}$ ,  $V_{oc}$ ,  $P_{max}$



Scan the QR code to get more information

Web: [www.thornovasolar.com](http://www.thornovasolar.com)

E-mail: [info@thornovasolar.com](mailto:info@thornovasolar.com)

\* The technical parameters contained in this data sheet may exhibit variations contingent upon the region. Thornova Solar do not guarantee their full accuracy. Due to continuous innovation, research, development and products improvements, Thornova Solar reserve the right to adjust the information in this data sheet at any time without prior notice. Clients are urged to procure the most recent version of this data sheet and incorporate it as an intrinsic component of the legally binding agreement ratified by both parties. The Chinese (or any other language) translation of this data sheet is for reference only. If there is any discrepancy between the English version and the Chinese version (or other language versions), the English version shall prevail.