

# Tangra<sup>™</sup>L Pro HD

N-Type High efficiency Bifacial Dual Glass Module

TS-BGT66(700-720)-G12



Bifacial technology allows for the harvesting of up to an additional 30% energy from the rear side of the module.



30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.



N-type solar cell has no LID naturally which can increase power generation.



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**

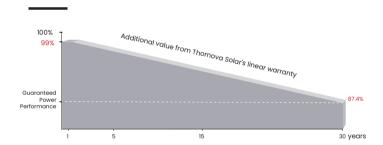
Warranty partner





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

# LINEAR PERFORMANCE WARRANTY



Product quality & process warranty

**30** years Linear power guarantee

**U.4U**<sub>%</sub>
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

\* 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-BGT66(700)-G12		TS-BGT66(705)-G12		TS-BGT66(710)-G12		TS-BGT66(715)-G12		TS-BGT66(720)-G12	
	STC	NMOT								
Peak power - P <sub>mp</sub> (W)	700	534	705	538	710	542	715	546	720	550
Open circuit voltage - V <sub>oc</sub> (V)	48.60	46.00	48.80	46.20	49.00	46.40	49.20	46.60	49.40	46.80
Short circuit current - I <sub>sc</sub> (A)	18.32	14.76	18.36	14.80	18.40	14.83	18.44	14.86	18.48	14.89
MPP voltage - $V_{mp}(V)$	40.50	38.00	40.70	38.20	40.90	38.40	41.10	38.60	41.31	38.80
MPP current - I <sub>mp</sub> (A)	17.29	14.05	17.33	14.08	17.36	14.12	17.39	14.15	17.42	14.18
Module efficiency - η <sub>m</sub> (%)	22.5		22.7		22.9		23.0		23.2	

 $\textbf{STC} \quad \text{(Standard Testing Conditions): Irradiance 1000W/m}^2, \text{Cell Temperature 25} \,\, ^\circ\!\!\!\!\!\!\!^\circ \text{, Spectra at AM1.5}$ 

NMOT (Nominal Module Operating 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 <sub>mp</sub> (W)	776	782	786	788	797
Open circuit voltage - V <sub>oc</sub> (V)	48.60	48.80	49.00	49.20	49.40
Short circuit current - $I_{sc}(A)$	20.30	20.34	20.39	20.43	20.48
MPP voltage – $V_{mp}(V)$	40.50	40.70	40.88	40.88	41.31
MPP current - I <sub>mp</sub> (A)	19.16	19.20	19.23	19.27	19.30
Irradiance ratio (rear/front)			13.5%		

### STRUCTURAL CHARACTERISTICS

Module dimension (L*W*H)	93.86 x 51.30 x 1.30 inch (2384 x 1303 x 33 mm)		
Weight	80.91 lbs (36.7 kg)		
Number of cells	132 cells		
Cell	N-type monocrystalline (8.27 X 8.27 inch (210 X 210mm))		
Front Glass	2.0mm, Anti-Reflection Coating		
Back Glass	2.0mm, Heat Strengthened Glass		
Frame	Anodized aluminum alloy		
Junction box	IP68 rated (3 diodes)		
Output wire	4mm² (IEC),12 AWG (UL)		
Wire length (Including Connector)	+400/-200mm (+15.75/-7.87in.)or customized		
Connector	MC4 Compatible		
Pieces per Pallet	33 pcs/Pallet		
Pieces per Container (Normal/Weight-limited area)	594/495 pcs/40'HQ		

### **OPERATING PARAMETERS**

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	35
Current operating temperature (°C )	-40~+185 °F (-40~+85 °C)
Bifaciality	80±10 %
Fire performance	Type 29

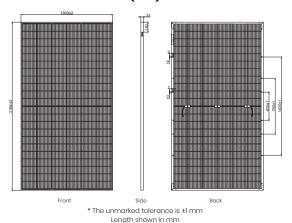
### **MECHANICAL LOADING**

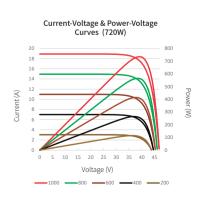
Front side maximum static loading (Pa)	5400
Rear side maximum static loading (Pa)	2400
Hailstone test (mm)	35

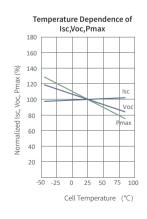
# **TEMPERATURE RATINGS**

Temperature coefficient (P <sub>max</sub> )	-0.29 %/K
Temperature coefficient (V <sub>oc</sub> )	-0.28 %/K
Temperature coefficient (I <sub>sc</sub> )	+0.04 %/K
Nominal Module Operating Temperature	109.4±35.6 °F (43±2 °C)

# **MODULE DIMENSIONS (MM)**









Scan the QR code to get more information

Web: www.thornova-solar.com

E-mail: info@thornova-solar.com

\* The parameters delineated within this datasheet, both technical and monetary, may exhibit variations contingent upon the region. Thornova Solar provides no warranty as to their absolute accuracy. Owing to our unceasing commitment to innovation, research, development, and product enhancement. Thornova Solar provides no warranty as to their dasolute accuracy. Owing to our unceasing commitment to innovation, research, development, and product enhancement. Thornova Solar retains the discretion to amend any information encapsulation encapsulation of this datasheet without comporate it as an intrinsic component of the legally binding agreement ratified by both parties. The English renation of this datasheet serves purely as a point of reference. Should discrepancies arise between the English text and versions rendered in other languages, the stipulations of the English versions shall take procedure.



