

# 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**

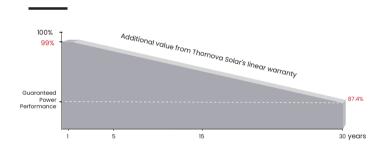
Warranty partner





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

# LINEAR PERFORMANCE WARRANTY



Product quality & process quarantee

**30** years Linear power quarantee

**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 - $V_{\infty}(V)$	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 <sub>mp</sub> (V)	40.50	38.00	40.70	38.20	40.90	38.40	41.10	38.60	41.32	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	2.5	22	2.7	22	2.9	23	3.0	23	3.2

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C , Spectra at AM1.5 NMOT (Nominal Module Operating Temperature): Irradiance 800W/m², 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 <sub>mp</sub> (W)	776	782	786	788	789
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	40.88
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 1.38 inch (2384 x 1303 x 35 mm)		
Weight	80.91 lbs (36.7kg)		
Number of cells	132 cells		
Cell	N-type monocrystalline (8.27X8.27 inch (210X210 mm))		
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 mm²		
Wire length (Including Connector)	(+): 400 mm, (-): 200 mm or Customized Length		
Connector	MC4 Compatible		
Packing specification	31 pcs/Pallet; 496 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 %

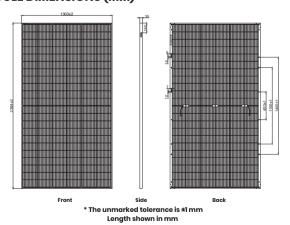
### **MECHANICAL LOADING**

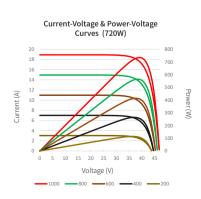
Front side maximum static loading (Pa)	5400
Rear side maximum static loading (Pa)	2400
Hailstone test (mm)	35

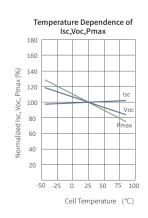
## **TEMPERATURE RATINGS**

Temperature coefficient (P <sub>max</sub> )	-0.29 %/K
Temperature coefficient $(V_{oc})$	-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.thornovasolar.com

E-mail: info@thornovasolar.com

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