

# Tangra<sup>™</sup>L Pro 685-705W

N-type Bifacial Double Glass Mono Module



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



30-year lifespan delivers 10-30% more power compared with conventional P-type modules



The natural lack of LID in the N-type solar cell can increase power generation



Excellent low irradiance performance



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



Industry-leading, lowest thermal coefficient



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



Certified to withstand 2400 Pa of wind load and 5400 Pa of snow load



100% triple EL test, which greatly reduces the hidden cracks rate

### PERFORMANCE INSURANCE





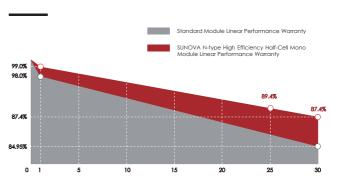






<sup>\*</sup> Optional performance warranty insurance. Please contact our local sales representatives for more information.

# LINEAR PERFORMANCE WARRANTY



Product quality & process guarantee

Linear power guarantee

Annual degradation

# COMPREHENSIVE CERTIFICATES







ISO 9001: Quality Management System

ISO 14001: Environmental Management System Standard

ISO 45001: International Occupational Health and

Safety Assessment System Standard

2014 Social Accountability Management System SA 8000:

Make it happen! www.sunova-solar.com

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



Model of modules	SS-BG685-66	SMDH-G12(T)	SS-BG690-66MDH-G12(T)		SS-BG695-66MDH-G12(T)		SS-BG700-66MDH-G12(T)		SS-BG705-66MDH-G12(T)	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
$\operatorname{Maximum\ power} - \operatorname{P}_{\operatorname{mp}}(W)$	685	510	690	514	695	524	700	527	705	531
Open-circuit voltage $-V_{oc}(V)$	46.38	43.78	46.43	43.83	47.23	44.58	47.38	44.72	47.53	44.87
Short-circuit current $-I_{sc}(A)$	18.54	14.98	18.63	15.05	18.68	15.09	18.70	15.11	18.73	15.13
${\rm Maximum\ power\ voltage} - {\rm V_{mp}}({\rm V})$	39.12	36.63	39.25	36.75	39.50	36.98	39.67	37.14	39.85	37.30
${\rm Maximum\ power\ current} - {\rm I}_{\rm mp}  {\rm (A)}$	17.51	13.93	17.58	13.99	17.59	14.16	17.64	14.20	17.69	14.24
Module efficiency — $\eta_m$ (%)	22.05		22.21		22.37		22.53		22.70	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C , Spectra at AM1.5 NOCT (Nominal Operating Cell 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>max</sub> ) (W)	759	765	770	776	781
Open Circuit Voltage (V <sub>oc</sub> ) (V)	46.38	46.43	47.23	47.38	47.53
Short Circuit Current (I <sub>sc</sub> ) (A)	20.54	20.64	20.70	20.72	20.75
${\rm Maximum\ power\ voltage} - {\rm V_{mp}(V)}$	39.12	39.25	39.50	39.67	39.85
Maximum power current — I <sub>mp</sub> (A)	19.40	19.48	19.50	19.55	19.60

#### STRUCTURAL CHARACTERISTICS

Module size (L*W*H)2384 x 1303 x 35 mmWeight38.5 kgCell132 cells, N-type MonocrystallineFront Glass2.0mm, Anti-Reflection CoatingBack Glass2.0mm, Heat Strengthened GlassFrameAnodized aluminum alloy (Silver/Black)Junction boxIP68, 3 bypass diodesOutput wire4.0 mm²Wire length300mm/1200mm/customizedConnectorMC4 CompatiblePacking Specification31pcs/Pallet; 558 pcs/40'HQ				
Cell 132 cells, N-type Monocrystalline  Front Glass 2.0mm, Anti-Reflection Coating  Back Glass 2.0mm, Heat Strengthened Glass  Frame Anodized aluminum alloy (Silver/Black)  Junction box IP68, 3 bypass diodes  Output wire 4.0 mm²  Wire length 300mm/1200mm/customized  Connector MC4 Compatible	Module size (L*W*H)	2384 x 1303 x 35 mm		
Front Glass  2.0mm, Anti-Reflection Coating  Back Glass  2.0mm, Heat Strengthened Glass  Frame  Anodized aluminum alloy (Silver/Black)  Junction box  IP68, 3 bypass diodes  Output wire  4.0 mm²  Wire length  300mm/1200mm/customized  Connector  MC4 Compatible	Weight	38.5 kg		
Back Glass  2.0mm, Heat Strengthened Glass  Frame  Anodized aluminum alloy (Silver/Black)  Junction box  IP68, 3 bypass diodes  Output wire  4.0 mm²  Wire length  300mm/1200mm/customized  Connector  MC4 Compatible	Cell	132 cells,N-type Monocrystalline		
Frame Anodized aluminum alloy (Silver/Black)  Junction box IP68, 3 bypass diodes  Output wire 4.0 mm²  Wire length 300mm/1200mm/customized  Connector MC4 Compatible	Front Glass	2.0mm, Anti-Reflection Coating		
Junction boxIP68, 3 bypass diodesOutput wire4.0 mm²Wire length300mm/1200mm/customizedConnectorMC4 Compatible	Back Glass	2.0mm, Heat Strengthened Glass		
Output wire     4.0 mm²       Wire length     300mm/1200mm/customized       Connector     MC4 Compatible	Frame	Anodized aluminum alloy (Silver/Black)		
Wire length 300mm/1200mm/customized  Connector MC4 Compatible	Junction box	IP68, 3 bypass diodes		
Connector MC4 Compatible	Output wire	4.0 mm <sup>2</sup>		
	Wire length	300mm/1200mm/customized		
Packing Specification 31pcs/Pallet; 558 pcs/40'HQ	Connector	MC4 Compatible		
	Packing Specification 31pcs/Pallet; 558 pcs/40'HQ			

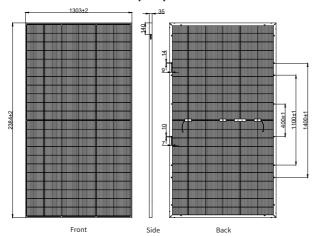
#### **OPERATING PARAMETERS**

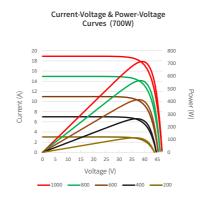
Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	35
Current operating temperature (°C )	-40~+85 °C
Mechanical load	5400 Pa / 2400 Pa

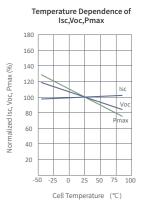
### **TEMPERATURE RATINGS**

Temperature coefficient (P <sub>max</sub> )	-0.30 %/°C
Temperature coefficient (V <sub>oc</sub> )	-0.28 %/°C
Temperature coefficient $(I_{sc})$	+0.04 %/°C
Nominal operating cell temperature	43±2℃

#### **MODULE DIMENSIONS (MM)**







Length shown in mm





Web: www.sunova-solar.com

E-mail: info@sunova-solar.com

\*The technical parameters contained in this datasheet may deviate slightly. Sunova Solar does not guarantee that they are completely accurate. Varying optional data could be for different regions or prices. Please contact commercial people for confirmation. Due to continuous innovation, research and development and product improvement, Sunova Solar reserves the right to adjust the information in this datasheet at any time without prior notice. The customer should obtain the latest version of datasheet when signing the contract and make it an integral part of the binding contract signed by both parties. The Chinese (or other language) translation lites of this datasheet are for reference only. If there is any inconsistency between the English version and the Chinese version (or other language versions), the English version shall prevail.

Make it happen! SD202312001EN

 $<sup>^\</sup>star$  The unmarked tolerance is  $\pm 1\,\mathrm{mm}$