

# Tangra<sup>™</sup> M Pro HD 495-510W

N-type High Density 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





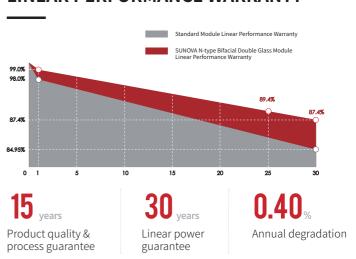






<sup>\*</sup> Optional performance warranty insurance. Please contact our local sales representatives for more information.

# LINEAR PERFORMANCE WARRANTY



## COMPREHENSIVE CERTIFICATES



ISO 9001: Quality Management System

ISO 14001: Environmental Management System Standard

ISO 45001: International Occupational Health and Safety Assessment System Standard

SA 8000: 2014 Social Accountability Management System

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<sup>\*</sup> 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	SS-BG495-60MDH-G10(T)		SS-BG500-60MDH-G10(T)		SS-BG505-60MDH-G10(T)		SS-BG510-60MDH-G10(T)	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power − P <sub>mp</sub> (W)	495	373	500	377	505	380	510	384
Open-circuit voltage — V <sub>oc</sub> (V)	43.52	41.08	43.65	41.20	43.78	41.33	43.91	41.45
Short-circuit current $-I_{sc}(A)$	14.37	11.61	14.47	11.69	14.57	11.77	14.66	11.85
Maximum power voltage − V <sub>mp</sub> (V)	36.76	34.41	36.88	34.52	37.00	34.63	37.12	34.74
Maximum power current − I <sub>mp</sub> (A)	13.46	10.84	13.56	10.91	13.65	10.99	13.74	11.06
Module efficiency — η <sub>m</sub> (%)	21.87		22.09		22.31		22.53	

STC (Standard Testing Conditions): Irradiance 1000W/m², 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)**

Peak Power (Pmax) (W)	548	554	560	565
Open Circuit Voltage (V <sub>oc</sub> ) (V)	43.52	43.65	43.78	43.91
Short Circuit Current (I <sub>sc</sub> ) (A)	15.93	16.03	16.14	16.24
${\rm Maximum\ power\ voltage} - {\rm V_{mp}}({\rm V})$	36.76	36.88	37.00	37.12
Maximum power current $-I_{mp}$ (A)	14.92	15.02	15.12	15.22

#### STRUCTURAL CHARACTERISTICS

Module size (L*W*H)  1996 x1134 x 30mm  Weight  27.4kg  Cell  120 cells, N-type Monocrystalline  Front glass  2.0mm, Anti-Reflection Coating  Back glass  2.0mm, Heat Strengthened Glass  Frame  Anodized aluminum alloy (Silver/Black)
Cell 120 cells, N-type Monocrystalline  Front glass 2.0mm, Anti-Reflection Coating  Back glass 2.0mm, Heat Strengthened Glass
Front glass 2.0mm, Anti-Reflection Coating Back glass 2.0mm, Heat Strengthened Glass
Back glass 2.0mm, Heat Strengthened Glass
Frame Anodized aluminum alloy (Silver/Black)
Junction box IP68, 3 bypass diodes
Output wire 4.0 mm <sup>2</sup>
Wire length 300mm/1200mm/customized
Connector MC4 Compatible
Packing Specification 36 pcs/Pallet; 792 pcs/40'HQ

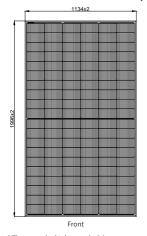
#### **OPERATING PARAMETERS**

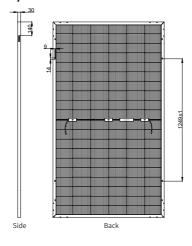
Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85 °C
Mechanical load	5400 Pa / 2400 Pa

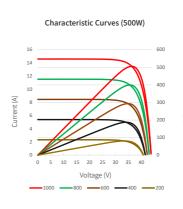
#### **TEMPERFORMANCE RATINGS**

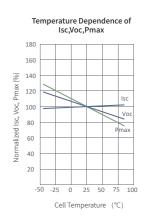
Temperature coefficient (P <sub>max</sub> )	-0.30 %/°C
Temperature coefficient (V <sub>oc</sub> )	-0.28 %/°C
Temperature coefficient $(I_{sc})$	+0.04 %/°C
Nominal operating cell temperature	43±2 ℃

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









<sup>\*</sup> The unmarked tolerance is ±1 mm Length shown in mm





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