

Tangra[™]**S** 465-485W

N-type High Efficiency Half-Cell Mono Module (Black Frame)



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.



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



Industry leading lowest thermal co-efficient of power.



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



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



100% triple EL test enabling remarkable reduction of hidden crack rate of modules

PERFORMANCE INSURANCE

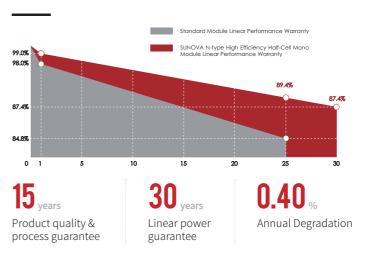






Optional performance warranty insurance. Please contact our local sales staff for more information.

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

^{*} Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

ELECTRIC CHARACTERISTICS



Model of modules	SS-465-60MDH(T)		SS-470-60MDH(T)		SS-475-60MDH(T)		SS-480-60MDH(T)		SS-485-60MDH(T)	
	STC	NOCT								
$\operatorname{Maximum\ power} - \operatorname{P}_{\operatorname{mp}}(\operatorname{W})$	465	346	470	350	475	354	480	358	485	361
Open-circuit voltage — V _{oc} (V)	42.75	34.30	42.88	34.40	43.01	34.51	43.14	34.61	43.27	34.72
Short-circuit current $-I_{sc}(A)$	13.36	10.10	13.43	10.18	13.51	10.25	13.58	10.33	13.65	20.41
Maximum power voltage − V _{mp} (V)	36.64	40.36	36.75	40.48	36.86	40.60	36.97	40.73	37.09	40.85
Maximum power current $-I_{mp}$ (A)	12.69	10.79	12.79	10.85	12.89	10.91	12.98	10.97	13.08	11.03
Module efficiency $-\eta_m$ (%)	21.6		21.8		22.0		22.2		22.5	
Power tolerance (W)	(0,+5)									
Maximum system voltage (V)	1500									
Maximum rated fuse current (A)	25									
Current operating temperature (°C)	-40~+85 °C									

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

STRUCTURAL CHARACTERISTICS

Module dimensions (L*W*H)	1903 x 1134 x 30mm		
Weight	24.0kg		
Number of cells	120 cells		
Cell	N-type Monocrystalline 182x91 mm		
Glass	Tempered, 3.2 mm AR, High transmittance, Low iron		
Frame	Black Anodized aluminum alloy		
Junction box	IP68, 3 bypass diodes		
Output wire	4.0 mm², wire length: 300mm/1200mm/customized		
Connector	MC4 Compatible		
Mechanical load	Snow load: 5400 Pa / Wind load: 2400 Pa		

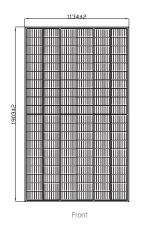
TEMPERATURE RATINGS

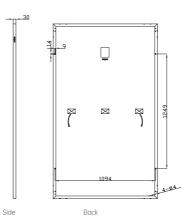
Temperature coefficient (P _{max})	-0.30 %/°C
Temperature coefficient (V _{oc})	-0.26 %/°C
Temperature coefficient (I _{sc})	+0.046 %/°C
Nominal operating cell temperature	43±2°C

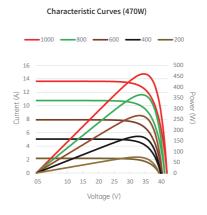
PACKAGING CONFIGURATION

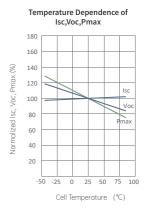
Container	40HQ
Quantity/pallet	36
Pallets/container	24
Quantity/container	864

MODULE DIMENSIONS (MM)









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Pv Tech Expert.

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Make it happen SD202310001EN

^{*} The unmarked tolerance is ±1 mm Length shown in mm