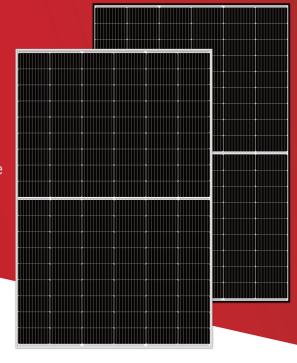




# Tangra<sup>™</sup> S 420-440W

N-type High Efficiency Half-Cell Mono Module





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





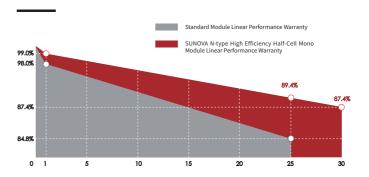






<sup>\*</sup> Optional performance warranty insurance. Please contact our local sales representatives for more information.

# 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.

#### **ELECTRICAL CHARACTERISTICS**



Model of modules	SS-420-54MDH(T)		SS-425-54MDH(T)		SS-430-54MDH(T)		SS-435-54MDH(T)		SS-440-54MDH(T)	
	STC	NOCT								
$\operatorname{Maximum\ power} - \operatorname{P}_{\operatorname{mp}}(\operatorname{W})$	420	313	425	317	430	320	435	324	440	328
Open-circuit voltage — V <sub>oc</sub> (V)	38.51	36.35	38.64	36.47	38.77	36.60	38.90	36.72	39.03	36.84
Short-circuit current $-I_{sc}(A)$	13.40	10.83	13.48	10.89	13.57	10.96	13.65	11.03	13.73	11.09
${\it Maximum power voltage-V_{mp}(V)}$	32.92	30.82	33.07	30.96	33.20	31.08	33.34	31.21	33.48	31.34
${\rm Maximum\ power\ current} - {\rm I}_{\rm mp}  ({\rm A})$	12.76	10.15	12.85	10.23	12.95	10.31	13.05	10.38	13.15	10.46
Module efficiency $-\eta_m$ (%)	21.51		21.76		22.02		22.28		22.53	
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

STRUCTURAL CHARACTERISTICS				
Module size (L*W*H)	1722 x1134 x 30 mm			
Weight	21.5 kg			
Number of cells	108 cells			
Cell	N-type Monocrystalline			
Glass	Tempered, 3.2 mm AR, High transmittance, Low iron			
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			
Mechanical load	Snow load: 5400 Pa / Wind load: 2400 Pa			

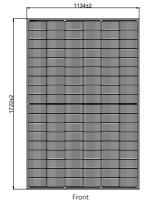
#### **OPERATING PARAMETERS**

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

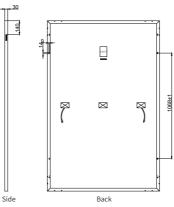
#### **PACKAGING CONFIGURATION**

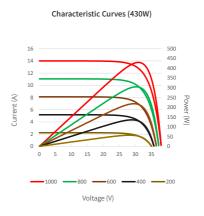
Container	40HQ
Quantity/pallet	36
Pallets/container	26
Quantity/container	936

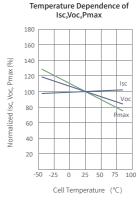
## **MODULE DIMENSIONS (MM)**











SUNOVA SOLAR

Pv Tech Expert.



E-mail: info@sunova-solar.com Web: www.sunova-solar.com

\* The technical parameters and prices contained in this data sheet may exhibit variations contingent upon the region and Sunova Solar does not guarantee their full accuracy. Due to continuous innovation, research, development and products improvements, Sunova Solar reserves the right to adjust the information in this data sheet at any time without prior notice. Clients are urged to procure the most recent version of this data sheet ad incorporate it as an intrinsic component of the legally binding agreement ratified by both parties. The Chinese (or any other language) translation of this data sheet is for reference only. If there is any discrepancy 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  $\pm 1~\text{mm}$  Length shown in mm