

# N-type

## TSxxxS8T-108GANT

xxx=420-440 in step of 5W

BIFACIAL MODULE WITH DUAL GLASS

### N-Type

Positive power tolerance of 0~+3%

IEC 61215(2016), IEC 61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018

Occupational health and safety management systems



## Key Features



### SMBB Technology

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



### Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



### Enhanced Mechanical Load

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

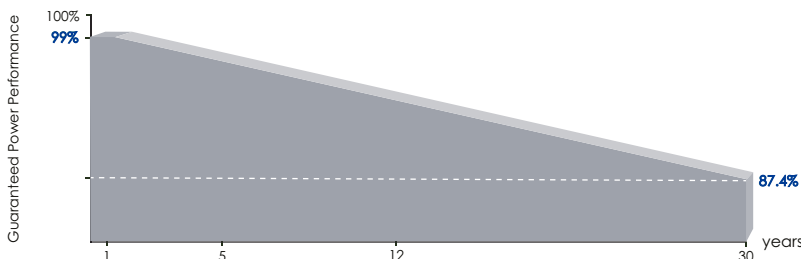


### Higher Power Output

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.



## LINEAR PERFORMANCE WARRANTY

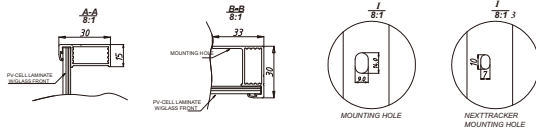
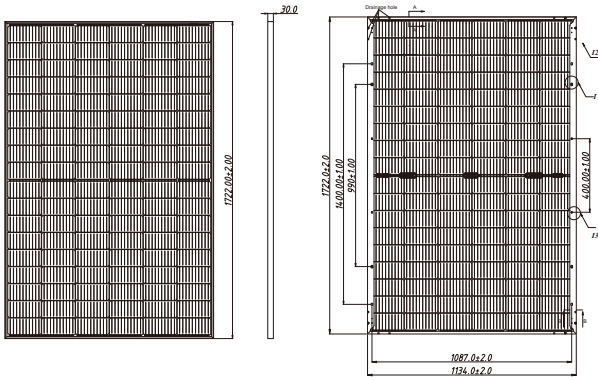


12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years

## Engineering Drawings



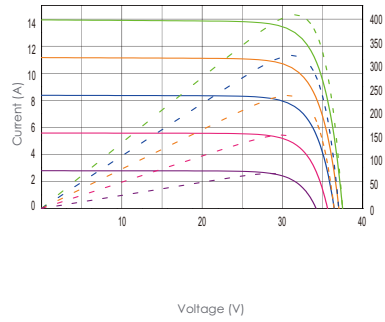
## Packaging Configuration

( Two pallets = One stack )

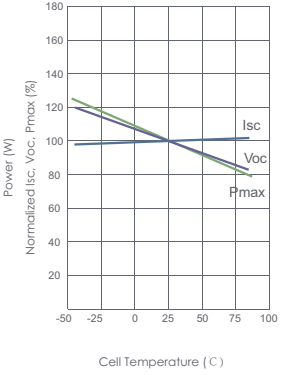
36pcs/pallets, 72pcs/stack, 936pcs/ 40'HQ Container

## Electrical Performance & Temperature Dependence

Current-Voltage & Power-Voltage Curves (410W)



Temperature Dependence of Isc, Voc, Pmax



## Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	108 (6×18)
Dimensions	1722×1134×30mm (67.80×44.65×1.18 inch)
Weight	25.5 kg (56.22 lbs)
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm (+): 400mm , (-): 200mm or Customized Length

## SPECIFICATIONS

Module Type	TS420S8T-108GANT		TS425S8T-108GANT		TS430S8T-108GANT		TS435S8T-108GANT		TS440S8T-108GANT	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	420Wp	313Wp	425Wp	317Wp	430Wp	320Wp	435Wp	323Wp	440Wp	326Wp
Maximum Power Voltage (Vmp)	31.80V	29.73V	32.01V	29.86V	32.21V	29.99V	32.42V	30.12V	32.65V	30.25V
Maximum Power Current (Imp)	13.21A	10.54A	13.28A	10.60A	13.35A	10.66A	13.42A	10.72A	13.48A	10.78A
Open-circuit Voltage (Voc)	38.05V	35.70V	38.20V	35.90V	38.32V	36.10V	38.45V	36.30V	38.60V	36.50V
Short-circuit Current (Isc)	14.09A	11.36A	14.16A	11.42A	14.23A	11.48A	14.30A	11.54A	14.36A	11.60A
Module Efficiency STC (%)	21.51%		21.76%		22.02%		22.28%		22.53%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	30A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.29%/°C									
Temperature coefficients of Voc	-0.25%/°C									
Temperature coefficients of Isc	0.045%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Refer. Bifacial Factor	80±5%									

## BIFACIAL OUTPUT-REAR SIDE POWER GAIN

		5%		15%		25%	
		Maximum Power (Pmax)	Module Efficiency STC (%)	Maximum Power (Pmax)	Module Efficiency STC (%)	Maximum Power (Pmax)	Module Efficiency STC (%)
		441Wp	22.58%	483Wp	24.73%	525Wp	26.89%
		446Wp	22.85%	489Wp	25.03%	531Wp	27.21%
		452Wp	23.12%	495Wp	25.32%	538Wp	27.53%
		457Wp	23.39%	500Wp	25.62%	544Wp	27.85%
		462Wp	23.66%	506Wp	25.91%	550Wp	28.17%

\*STC: Irradiance 1000W/m<sup>2</sup>

Cell Temperature 25°C

AM=1.5

NOCT: Irradiance 800W/m<sup>2</sup>

Ambient Temperature 20°C

AM=1.5

Wind Speed 1m/s