

# PIONEER 4

HIGH EFFICIENCY N-TYPE

430W · Bifacial 108 Cell Module

## America's Solar Module™

The best U.S.-built solar solution for quality, performance and reliability. S4A products are manufactured on American soil in accordance with the highest quality standards.



### SMBB Technology

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



### Better Reliability

Better reliability and lower LID/LETID.



### ISO 9001 Certified Factory



### Enhanced Mechanical Load

Certified to withstand: wind load (4300 Pascal) and snow load (5400 Pascal).



### Higher Power Output

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



### Strong Built

Hail Test at 45mm

Notice: All data and specifications are preliminary and subject to change without notice.

\*Subject to warranty terms and conditions

S4A430-108TH10BT

MODULE EFFICIENCY

22%



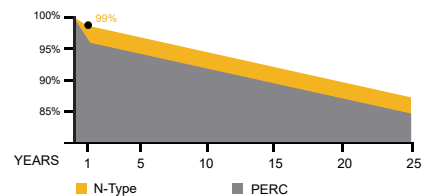
UL61730

Intertek



### Linear Power WARRANTY

≤1% 1<sup>st</sup> Year  
≤0.4% Year 2-25  
Annual Degradation



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Solar4America Technology Inc. is headquartered in Sacramento, California with production facilities in Sacramento and Sumter, SC. S4A products offer durability and exceptional performance to our customers at great value. Our state-of-the-art manufacturing facilities use industry-leading automated production equipment to optimize product performance and quality.

## ELECTRICAL PARAMETERS

Module Type	S4A425-108TH10BTT		S4A430-108TH10BTT		S4A435-108TH10BTT		S4A440-108TH10BTT	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power - Pmax (W)	425	320.6	430	325	435	328.9	440	332.5
Maximum Power Voltage - Vmpp (V)	31.66	29.6	31.97	29.7	32.27	29.9	32.41	30.1
Maximum Power Current - Impp (A)	13.42	10.83	13.45	10.93	13.48	11.01	13.58	11.05
Open Circuit Voltage - Voc (V)	37.87	35.7	37.96	35.8	38.25	36.1	38.57	36.40
Short Circuit Current - Isc (A)	14.19	11.46	14.31	11.55	14.44	11.66	14.49	11.70
Module Efficiency	21.76%		22.02%		22.27%		22.53%	

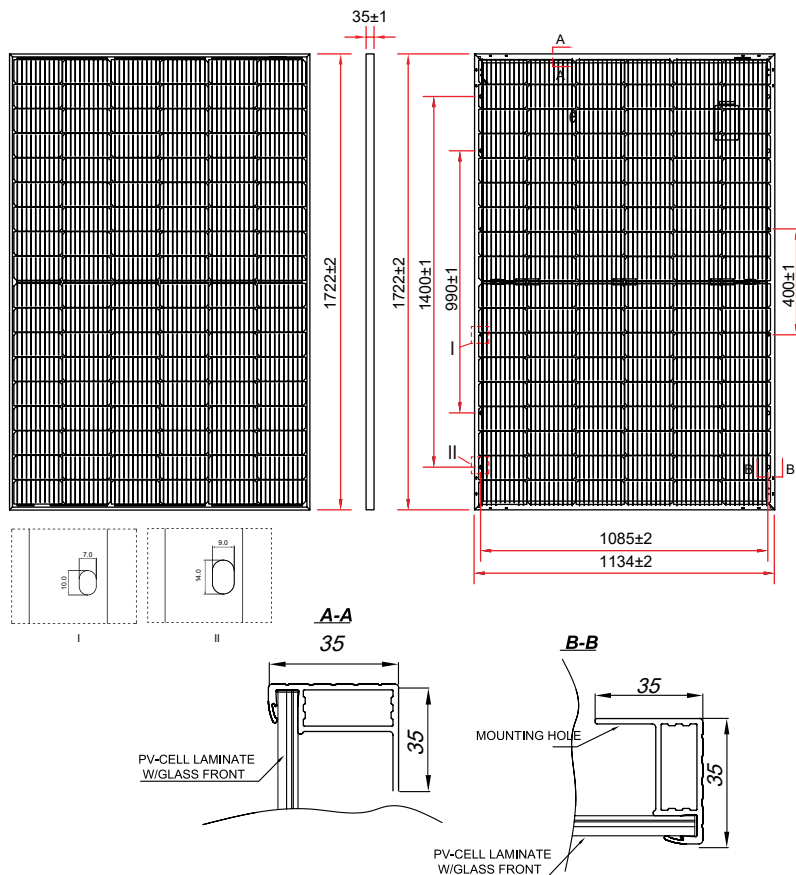
STC: irradiance 1,000 W/m<sup>2</sup>; Spectra at AM 1.5; module temperature 25°C. Power output tolerance: 0~+5W. Measuring tolerance of power: ±3%  
 NMOT: irradiance 800 W/m<sup>2</sup>; Spectra at AM 1.5; Cell temperature 45°C; Ambient temperature 20°C. Wind speed 1m/s

## TEMPERATURE CHARACTERISTICS

NMOT	42°C (±2°C)
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Voc	-0.25%/°C

## MATERIAL CHARACTERISTICS

Dimensions	67.8 x 44.65 x 1.38in (1722 x 1134 x 35mm)
Weight	46.3lbs (21kg)
Frame	Black anodized aluminum alloy
Glass	3.2mm anti-reflective coated tempered glass
Back Sheet	Transparent
Solar Cells	108(6 x 18) N-Type monocrystalline 182 x 91mm
Junction Box	IP68, 3 bypass diodes
Cable & Connector	Length 47.25in (1200mm), 1x4mm <sup>2</sup> / MC4/PV-CO02/PV-GZX1500



## MAXIMUM RATINGS

Maximum System Voltage (V)	1500
Series Fuse Rating (A)	30

## PACKAGING

Pallet Dimensions	70.08 x 45.67 x 49.61in (1780 x 1160 x 1260mm)
Pallet Quantity	31 Modules
Truck (53') Quantity	868 Modules

## SYSTEM DESIGN

Temperature Range	-40°C to +85°C
Mechanical Load Front	5,400 Pa
Mechanical Load Back	4,300 Pa
Safety Protection Class	Class II
Module Fire Performance	Type 1

