



# SunAlto PM054NT8

N Type TOPCon Mono-Crystalline Dual Glass  
Bifacial Photovoltaic Module

430W  
~  
445W

Power Range  
430~445W

N Type  
TOPCon

N-Type Module  
Advanced TOPCon  
Technology delivers  
superior module efficiency



Bifacial Energy Yield  
The light shining on  
the module rear-side with  
the increase of energy yield



Multi-Busbar Design  
Enhanced module power  
output and reliability



Strong Wind Resistance  
Dynamic mechanical loading  
4 times higher than  
the IEC requirement



Solution of Enhanced  
Salt Mist and  
Humidity Resistance  
Reliable in salt mist and  
humidity environment



PID-Resistance  
Superior PID-Resistance



# SunAlto PM054NT8 (430 ~ 445 Wp)

## Electrical Data (STC)

	Front			Rear-side			Front			Rear-side			Front			Rear-side		
Bifacial output Rear-side power gain %				5%	10%		5%	10%		5%	10%		5%	10%		5%	10%	
Nominal Power (W)	430	451.5	473	435	456.75	478.5	440	462	484	445	467.25	489.5						
Module Efficiency (%)	22.0%	23.1%	24.2%	22.3%	23.4%	24.5%	22.6%	23.7%	24.8%	22.8%	24.0%	25.1%						
Nominal Voltage $V_{mp}$ (V)	33.04	33.04	33.04	33.25	33.25	33.25	33.45	33.45	33.45	33.65	33.65	33.65						
Nominal Current $I_{mp}$ (A)	13.02	13.67	14.32	13.09	13.74	14.40	13.16	13.82	14.48	13.23	13.89	14.55						
Open Circuit Voltage $V_{oc}$ (V)	39.05	39.05	39.05	39.25	39.25	39.25	39.45	39.45	39.45	39.65	39.65	39.65						
Short Circuit Current $I_{sc}$ (A)	13.82	14.51	15.20	13.88	14.57	15.27	13.95	14.65	15.35	14.02	14.72	15.42						

- Above data are the effective measurement at Standard Test Conditions (STC)
- STC : irradiance 1000 W/m<sup>2</sup>, spectral distribution AM 1.5, temperature 25 ± 2 °C, in accordance with EN 60904-3
- Measurement tolerances STC : ± 3 %
- Maximum Tolerance of P<sub>N</sub> : 0/+3%

## Electrical Data (NMOT)

	327W	331W	335W	339W
Nominal Power P <sub>N</sub>	327W	331W	335W	339W
Nominal Voltage $V_{mp}$ (V)	31.45	31.65	31.84	32.03
Nominal Current $I_{mp}$ (A)	10.41	10.47	10.52	10.58
Open Circuit Voltage $V_{oc}$ (V)	37.43	37.62	37.81	38.00
Short Circuit Current $I_{sc}$ (A)	11.14	11.19	11.24	11.30

- Above data are the effective measurement at Nominal Module Operating Temperature (NMOT)
- NMOT : irradiance 800 W/m<sup>2</sup>, AM 1.5, air temperature 20 °C, wind speed 1 m/s

## Temperature Coefficient

NMOT	41 ± 2 °C
Typ. Temperature Coefficient of P <sub>N</sub>	-0.30% / °C
Typ. Temperature Coefficient of $V_{oc}$	-0.26% / °C
Temperature Coefficient of $I_{sc}$	0.046% / °C

## Mechanical Characteristics

Dimensions (L x W x H)	1722 x 1133 x 40mm (67.80x44.61x1.57in)*
Weight	25.3 kg (55.78 lbs)
Front Glass	Anti-Reflection Coating, Semi-toughened glass, 2.0mm (0.08 in)
N Type TOPCon Cell	54 monocrystalline solar cells (108 pcs)
Rear Glass	White Grid, Semi-toughened glass, 2.0mm (0.08 in)
Frame	Anodized aluminum frame
Junction Box	IP-68 rated with 3 bypass diodes
Connector Type	1500V : Staubli (MC4) PV-KST4-EVO2A/xy ; PV-KBT4-EVO2A/xy - 1 x 4mm <sup>2</sup> (0.04 x 0.16 in <sup>2</sup> )

\* Module Dimension (L x W) Tolerance : ± 2 mm (0.08 in)

## Operating Conditions

Operating Temperature	-40 ~ +70 °C
Ambient Temperature Range	-40 ~ +45 °C
Max. System Voltage	1500 V
Serial Fuse Rating	30 A
Front / Rear Test Load	6000 Pa / 4800 Pa
Max. Dynamic Mechanical Load	4800 Pa
Safety Class	II
Bifacial Factor	80% +/-10%

\* According to the latest regulations version of IEC 61730-1:2023

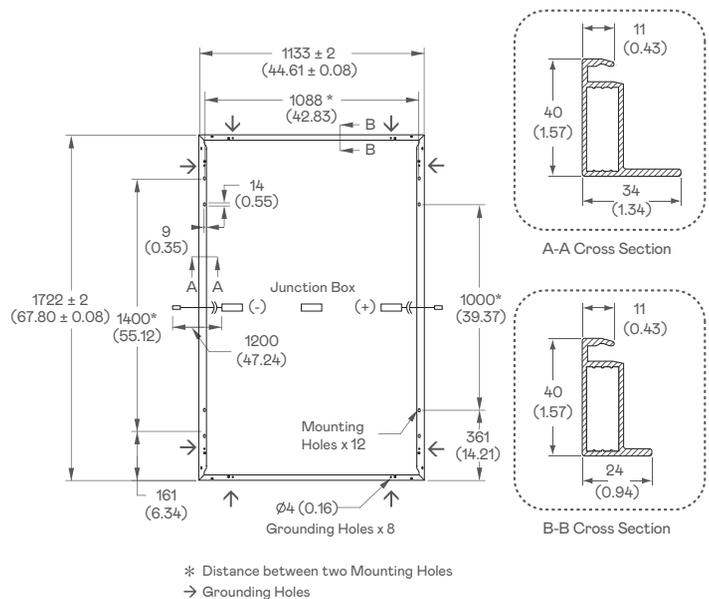
## Warranties and Certifications

Product Warranty	Maximum 12 years for material and workmanship
Performance Guarantee	Guaranteed linear degradation to 89.4% for 25 years**
Certifications	According to IEC/EN 61215 and IEC/EN 61730 guidelines**

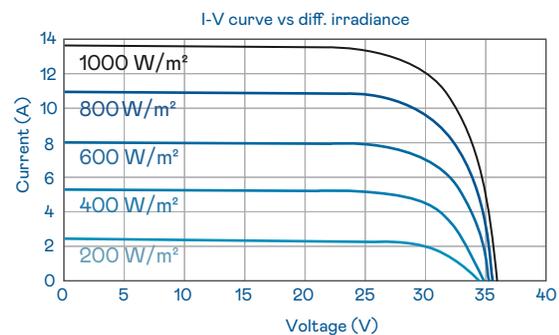
\* 1 : Please refer to warranty letter for detail

\* 2 : Please confirm other certifications with official dealers

## Dimensions mm (inch)



## I-V Curve



Current/voltage characteristics with dependence on irradiance and module temperature.

This datasheet complies with the EN 50380 requirements.

## Packing Configuration

Container	20' GP	40' GP	40' HQ
Pieces per Pallet	26	26	26
Pallets per Container	6	13	26
Pieces per Container	156	338	676



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## About AUO Corporation

AUO Corporation (AUO) is one of the world's leading providers of optoelectronic solutions. In addition to its strengths in product and technological innovation, AUO stresses its commitment to going green and to utilizing manufacturing excellence to develop reliable and high quality energy solutions for residential, commercial, and utility segments.

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