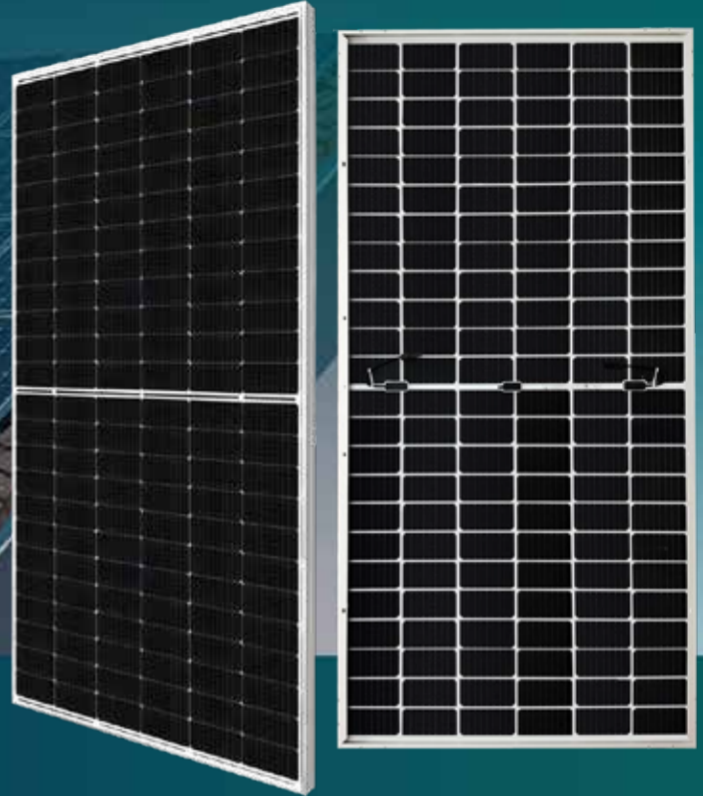




SOLENSO

NRJ-W144SS SERIES

460W 465W 470W 475W 480W
144-cell Bifacial HJT Mono Half-Cut cell Solar Module



CERTIFICATES



ADVANTAGES & FEATURE

• Up to 22.1% module efficiency

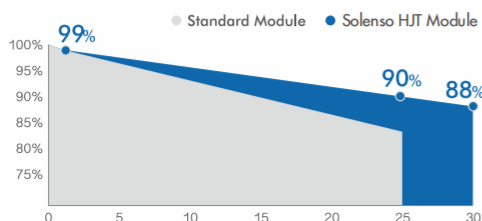
Using higher efficiency heterojunction solar cell, up to more than 22.1% module efficiency

• High Energy Yield

Excellent weak light performance and better performance in hot climate. Leading lowest temperature coefficient of power.

• SuperMBB Half-Cut Cell Technology

Using the advanced 9BB solar cell combines with half-cut cell technology to guarantee more power.



* Refer to Solenso Standard warranty for details.

• Enhanced Mechanical Load

Certified for snow load 5,400 Pa and wind loads 2,400 Pa

• Excellent Bifacial Efficiency

Bifaciality > 90%, effectively improves backside power generation.

• Industry Leading Output Warranty

- Solenso solar cell technology result in extremely low LID and Outstanding Anti-PID resistance.
- 12% power degradation in 30 years



Electrical Characteristics

Model	NRJ-W144SS 460		NRJ-W144SS 465		NRJ-W144SS 470		NRJ-W144SS 475		NRJ-W144SS 480	
	STC	BSTC	STC	BSTC	STC	BSTC	STC	BSTC	BSTC	STC
Rated Power in Watts-P _{max} (Wp)	460	510	465	515	470	520	475	525	480	530
Open Circuit Voltage-V _{oc} (V)	53.22	54.33	53.35	54.73	53.48	55.33	53.61	55.93	53.74	56.53
Short Circuit Current-I _{sc} (A)	10.58	11.53	10.64	11.57	10.7	11.61	10.76	11.65	10.82	11.69
Maximum Power Voltage-V _{mpp} (V)	45.24	46.2	45.44	46.4	45.66	46.6	45.86	46.8	46.08	47
Maximum Power Current-I _{mp} (A)	10.18	11.14	10.24	11.19	10.3	11.24	10.36	11.29	10.43	11.34
Module Efficiency (%) *	21.20%		21.40%		21.60%		21.90%		22.10%	
Operating Module Temperature	-40 to +85°C									
Maximum System Voltage	DC 1500V (IEC)									
Maximum Series Fuse	20A									
Rating Power Sorting	0~+5W									
Bifaciality (%)	90±5									

*STC: Irradiance 1000 W/m², module temperature 25°C, AM=1.5; Best in Class AAA solar simulator used, power measurement uncertainty is within +/- 3%.

*BSTC: Front side irradiation 1000W/m², back side reflection irradiation 135W/m², spectrum AM1.5, ambient temperature 25°C. Values are based on RETC certified results from a lightsoaked module.

Mechanical Characteristics

Laminate Structure	Glass/ POE/ Cells/ POE/ Glass
Cell Type	144 HJT Cells/ 166 x 83 mm
Module Dimensions	2094 x 1038 x 30 mm
Weight	27.5 kg
Junction Box	Degree of protection IP67/IP68
Output Cable	4mm ² , 200mm in length, length can be customized
Connectors Type	UV Resistant Cable/Compatible MC4
Frame	Anodised Aluminum Alloy
Encapsulant	POE
Front Load*	5400 Pa
Rear Load*	2400 Pa
Glass	(F) 2.0mm Anti-reflective surface Solar glass (B) 2.0mm white ceramic patterned PV glass

* Mechanical load test report per Solar PTL (IEC 61730)

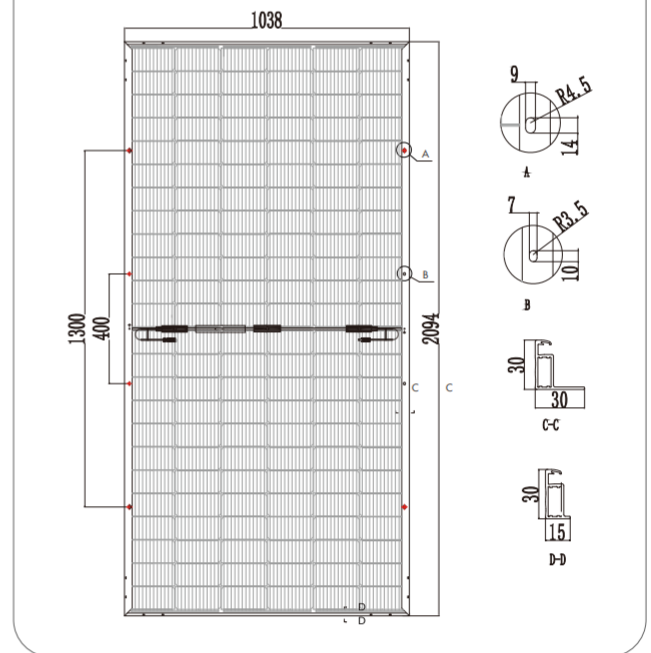
Temperature Characteristics

Nominal Operating Cell Temp. (NOCT)	44°C (±2°C)
P _{max}	-0.26 %/°C
V _{oc}	-0.24 %/°C
I _{sc}	0.04 %/°C

Shipping Configurations

	HC
Container Length	40'
Pallets Per Container	22
Modules Per Pallet	36 pcs
Modules Per Container	792 pcs

Engineering Drawings



Certifications & Warranty

Safety	Class II
Fire Rating	Class A
Product Warranty	20 Yrs Workmanship
Performance Warranty of P _{max}	30 Yrs Power Output (Linear)*

* 1st year 99%, after 2nd year 0.37% annual degradation to year 30.

