

530-550 Watt Module

144 Half Cut Monocrystalline PERC

Model: AA-550US-6x24GW



Bilasolar.com



Cells Made in USA, Modules Made in Indiana

Proudly made in the USA with cells that qualify for domestic content requirements.



Enhanced Bifacial Performance

Bifacial Mono PERC cells provide more power output in low light conditions increasing overall energy yield.



Positive Power Tolerance

Positive power tolerance of 0~+5W guaranteeing more power.



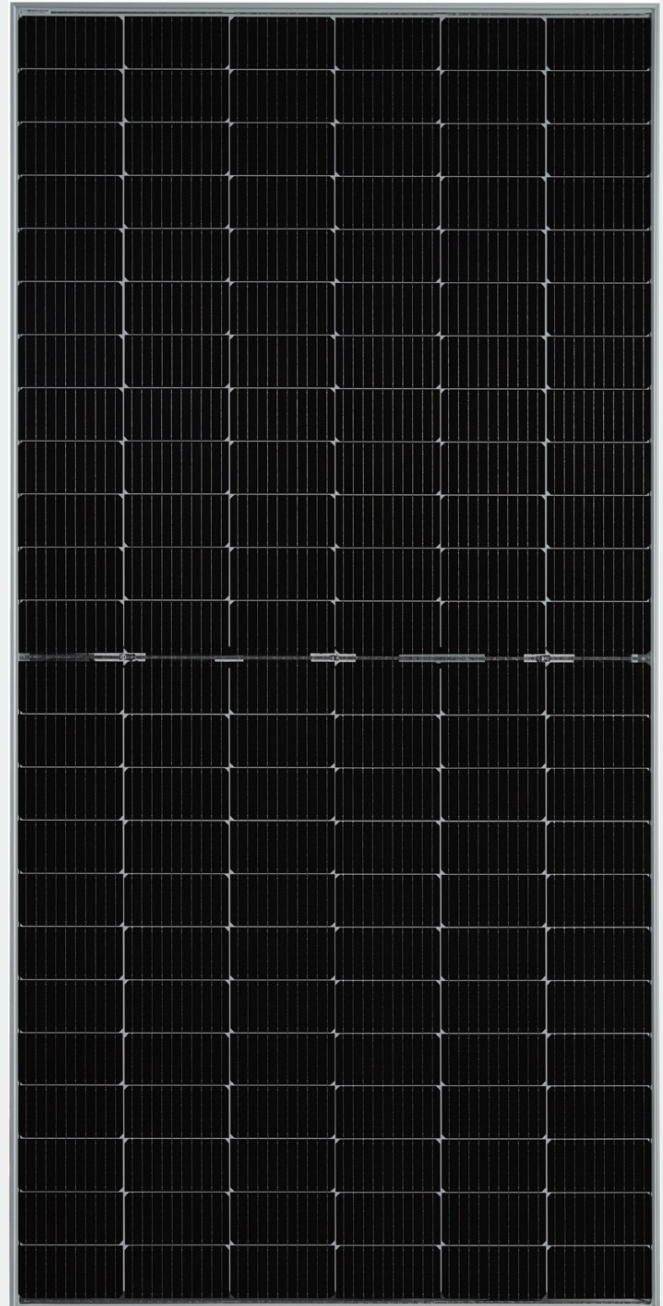
Durable Mechanical Construction

Large format module certified to withstand snow loads (up to 5400 Pa) and extreme wind (up to 2400 Pa).



Quality Standards & Certifications

Quality components, quality built, quality performance. Conforms to UL 61730 and UL 61215.



PREMIUM PRODUCT WARRANTY

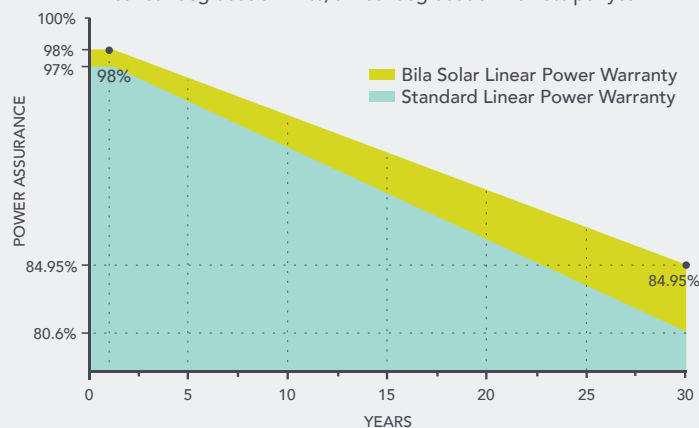
12
Years

Product Materials & Workmanship Warranty*

30
Years

Linear Power Performance Warranty*

1st Year degradation <2%, annual degradation <0.45% per year.



*According to the applicable Bila Solar, Inc. Limited Product Warranty.

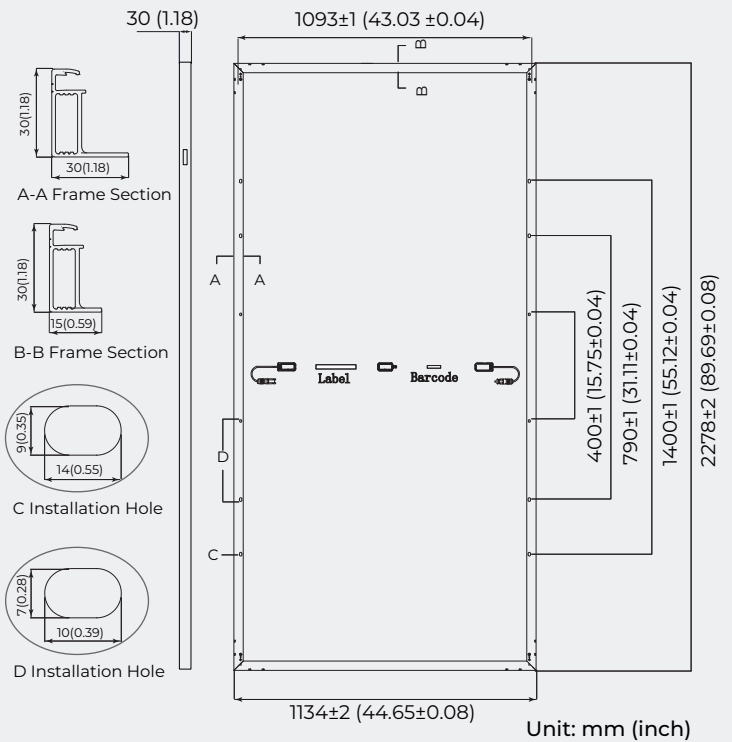
Caution: Read installation manual before using the product. Specifications included in this data sheet are subject to change without notice. © 2025 Bila Solar, Inc. All rights reserved.

Mechanical Specifications

Solar Cell	Mono PERC 182mm
No. of Cells	144 (6 × 24)
Dimensions	2278 × 1134 × 30mm (89.69× 44.65 × 1.18in.)
Weight	27.6kg (60.85lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm ² (IEC), 12 AWG (UL) +400/-200mm (+15.75/-7.87in.) or customized
Connector	MC4 or similar
Front Cover	3.2mm (0.126in.) semi-tempered AR glass
Container	36 pcs/pallet, 576 pcs/53' dry van

Operating Parameters

Max. System Voltage	DC 1500V (IEC/UL)
Operating Temperature	-40°C ~ +85°C (-40°F ~ +185°F)
Max. Fuse Rating	25A
Frontside Max. Loading	5400Pa (112lb/ft ²)
Backside Max. Loading	2400Pa (50lb/ft ²)
Fire Resistance	UL Type 1



Electrical Characteristics - STC

Irradiance 1000 W/m², cell temperature 25 °C, AM 1.5, Test uncertainty for Pmax: ±3%

Maximum Power at STC (Pmax/W)	550	545	540	535	530
Power Tolerance (W)	0 ~ +5				
Rated Voltage @ MPP (Vmp/V)	41.96	41.80	41.64	41.47	41.31
Rated Current @ MPP (Imp/A)	13.11	13.04	12.97	12.90	12.83
Open Circuit Voltage (Voc/V)	49.90	49.75	49.60	49.45	49.30
Short Circuit Current (Isc/A)	14.00	13.93	13.86	13.79	13.72
Module Efficiency	21.3%	21.1%	20.9%	20.7%	20.5%

Electrical Characteristics - NMOT

Irradiance 800 W/m², ambient temperature 20 °C, AM 1.5, wind speed 1 m/s.

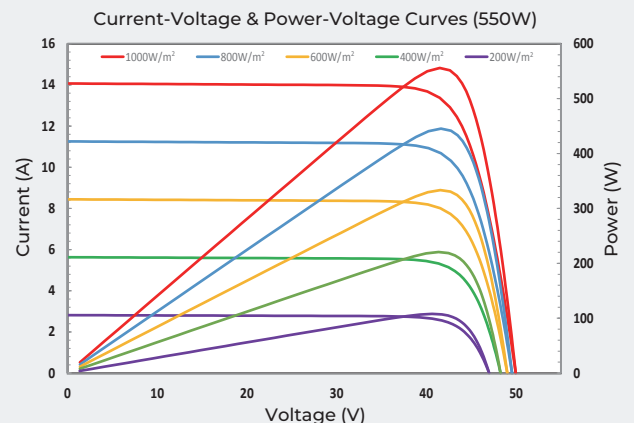
Maximum Power at NMOT (Pmax/W)	416.0	412.2	408.5	404.6	400.8
Rated Voltage @ MPP (Vmp/V)	39.79	39.64	39.49	39.33	39.18
Rated Current @ MPP (Imp/A)	10.46	10.40	10.34	10.29	10.23
Open Circuit Voltage (Voc/V)	47.32	47.18	47.04	46.89	46.75
Short Circuit Current (Isc/A)	11.30	11.24	11.18	11.13	11.07

Temperature Characteristics

Nominal Module Operating Temperature	42 ± 2 °C
Nominal Cell Operating Temperature	45 ± 2 °C
Temperature Coefficient of Pmax	-0.35%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Isc	0.048%/°C

Warranty

Product Workmanship Warranty	12 Years
Linear Power Output Warranty	30 Years
First Year Degradation	2%
Annual Power Degradation	0.45%



AA-550US-6x24GW-Ver2.2 (February 2025)