BILA SOLAR

530-550 Watt Dual Glass Module

144 Half Cut Bifacial Monocrystalline PERC

Model: AA550US-6x24GG

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

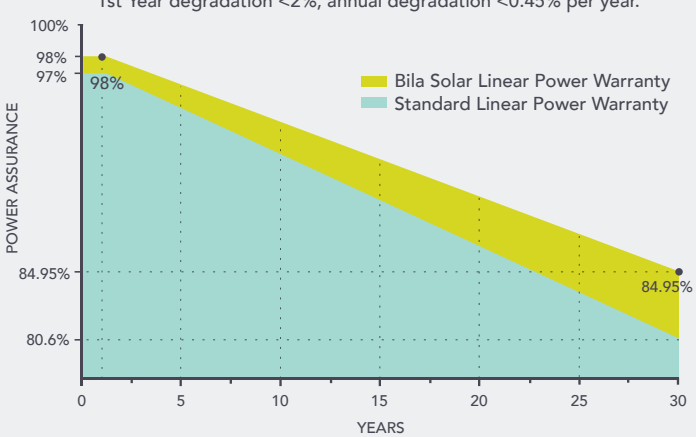
Quality components, quality built, quality performance. Conforms to UL 61730 and UL 61215.

PREMIUM PRODUCT WARRANTY

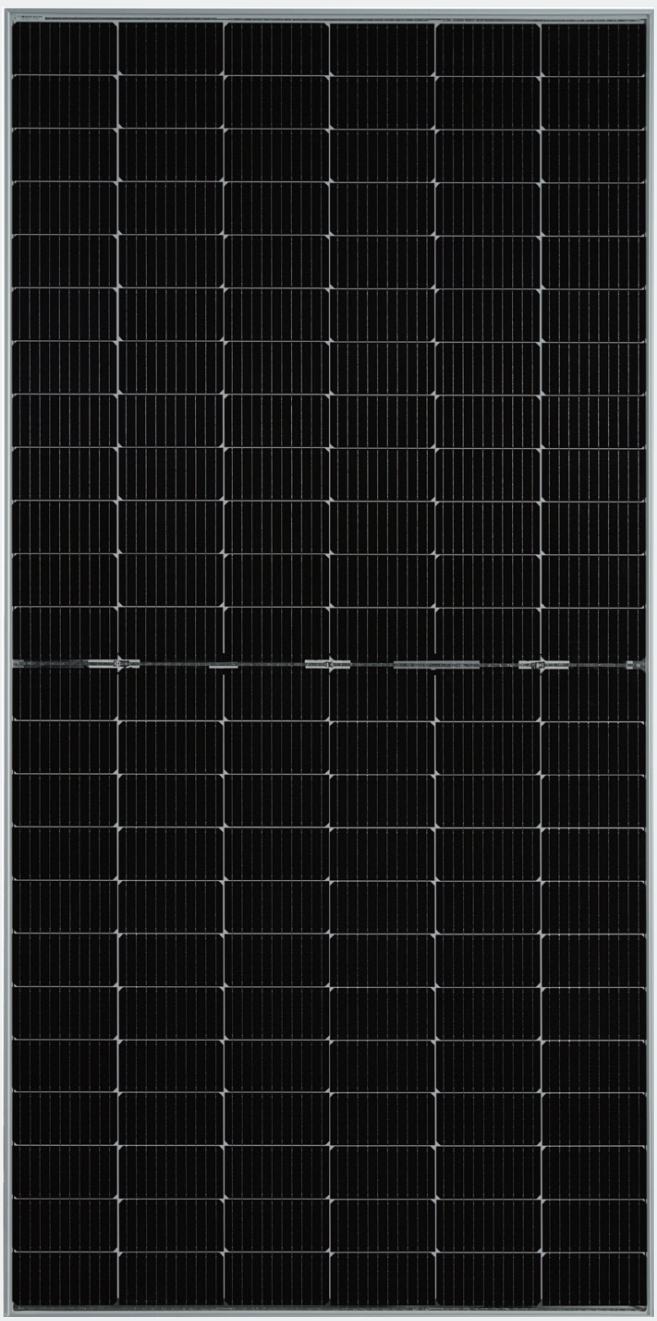
12 Years — Product Materials & Workmanship Warranty*

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.

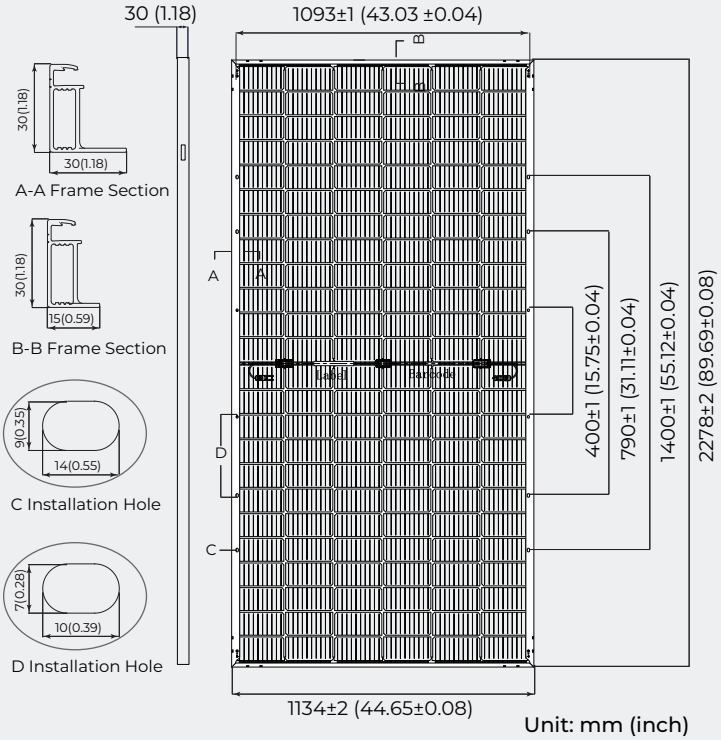


Mechanical Specifications

Solar Cell	Mono PERC 182mm
No. of Cells	144 (6 × 24)
Dimensions	2278 × 1134 × 30mm (89.69× 44.65 × 1.18in.)
Weight	31.8kg (70.11lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm² (IEC), 12 AWG (UL) +400/-200mm (+15.75/-7.87in.) or customized
Connector	MC4 or similar
Front Cover	2.0mm (0.079in.) semi-tempered AR glass
Back Cover	2.0mm (0.079in.) semi-tempered 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/ft²)
Backside Max. Loading	2400Pa (50lb/ft²)
Bifaciality	70%±5%
Fire Resistance	UL Type 29



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.

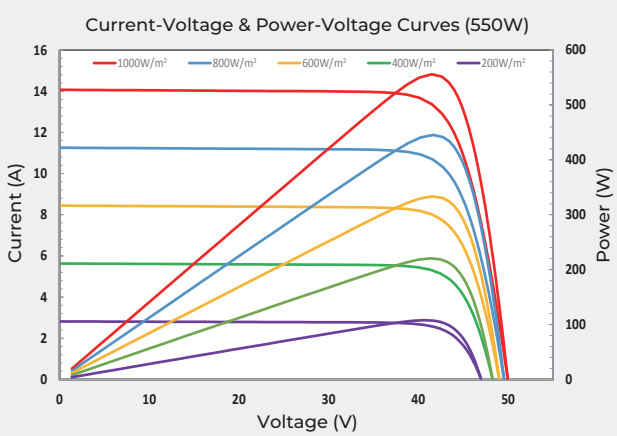
Maximum Power at NMOT (Pmax/W)	416.0	412.2	408.5	404.6	400.8
Rated Voltage @ MPP (Vmp/V)	39.79	39.64	39.49	39.33	39.18
Rated Current @ MPP (Imp/A)	10.46	10.40	10.34	10.29	10.23
Open Circuit Voltage (Voc/V)	47.32	47.18	47.04	46.89	46.75
Short Circuit Current (Isc/A)	11.30	11.24	11.18	11.13	11.07

Rearside Power Gain (Reference to 550W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	578	633	688
Rated Voltage @ MPP (Vmp/V)	41.96	42.06	42.06
Rated Current @ MPP (Imp/A)	13.76	15.04	16.35
Open Circuit Voltage (Voc/V)	49.90	50.00	50.00
Short Circuit Current (Isc/A)	14.70	16.07	17.46
Module Efficiency	22.4%	24.5%	26.6%

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



AA550US-6x24GG-Ver2.3 (April 2025)

BILA SOLAR
Bila Solar — Made with pride in Indiana.
1249 S. White River Pkwy E. Dr.
Indianapolis, IN 46225
Bilasolar.com