

MEGA SERIES 580-600W BIFACIAL SOLAR PANEL

MODEL: RS-M580BF / RS-M600BF

23.03%

Maximum Efficiency

600W

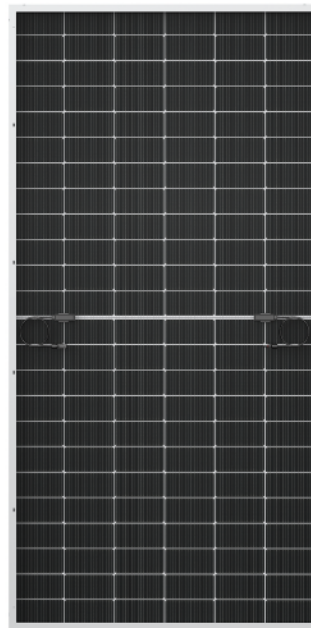
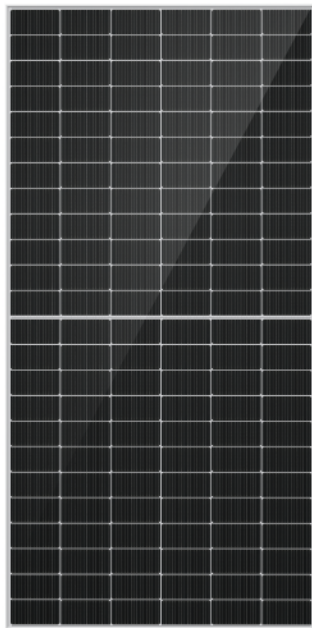
Maximum Power Output

0~+5W

Positive Power Tolerance

IP68

Waterproof Rate



FEATURES

High Efficiency N-TOPCon Technology

16 busbar solar cell enhances light absorption, achieving 23.03% efficiency
144 cell monocrystalline module delivers a 600W maximum power output.
Zero LID (Light-Induced Degradation) – 1% first-year degradation for stable long-term output
Low-Light Optimization – Generates power even on cloudy/foggy days.

Premium Durability & Warranty

12-year product warranty + 30-year linear power output guarantee ($\leq 0.4\%$ annual degradation)
IP68 Junction Box & Anti-Reflective Glass – Fully weatherproof for extreme environments
Bifacial Energy Boost – Up to 25% rear-side power gain (depends on ground reflectivity)
1500V System Voltage – Reduces BOS costs for utility-scale projects

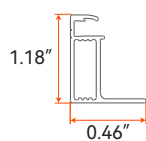
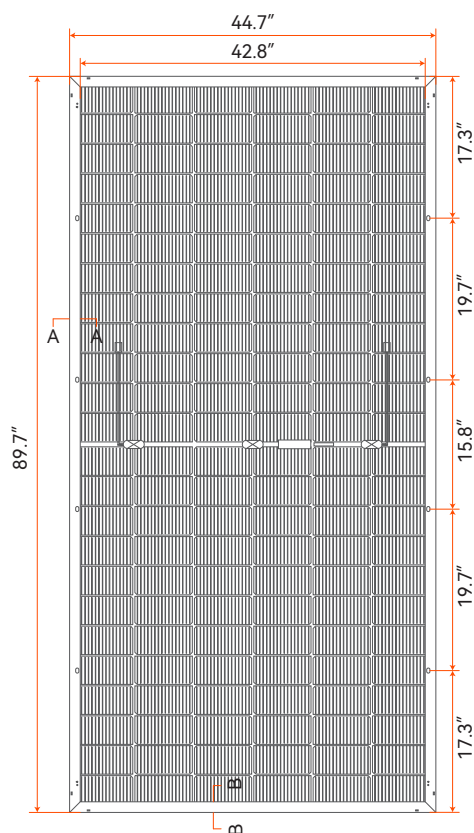
Smart Structural Design

Optimized Dimensions (89.7×44.6×1.18 in) – Higher power per square meter vs. industry average
Lightweight Yet Strong – 68.8 lb with anodized aluminum frame
Certified Wind/Snow Load – 5400Pa (front) / 2400Pa (rear)
Plug-and-Play MC4 Connectors – Custom cable lengths available

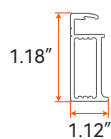
Reliable Temperature Performance

-0.30%/°C Power Coefficient – Minimal heat-related losses (better than PERC modules)
-40°F to +185°F Operating Range – Stable output in extreme climates

DIMENSIONS



A-A



B-B

1.2"

ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)	580 W	600 W
Power Output Tolerance-PMAX (W)	0~+5 W	0~+5 W
Maximum Power Voltage-VMPP (V)	42.7 V	43.5 V
Maximum Power Current-IMPP (A)	13.6 A	13.8 A
Open Circuit Voltage-VOC (V)	51.4 V	52.2 V
Short Circuit Current-ISC (A)	14.3 A	14.6 A
Maximum System Voltage	1500 VDC	1500 VDC
Maximum Series Fuse Rating	30 A	30 A
Module Efficiency η_m (%)	22.5 %	23.0 %

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM = 1.5

MECHANICAL DATA

Solar Cells	Monocrystalline 7.2 × 3.6 in (182 × 91 mm)
Module Dimensions	89.7 × 44.7 × 1.2 in (2278 × 1134 × 30 mm)
Cell Orientation	144 cells (6 × 12 × 2)
Weight	68.8 lb (31.2 kg)
Front Glass	2.0 mm, highly transparent tempered glass with anti-reflective coating
Connector	Solar Connectors
Frame	Anodized Aluminum Alloy / Polyurethane Composite Frame
Junction Box	IP 68 rated
Cables	4 mm ² , 47.2 in (1200 mm)
Diode Quantity	3 pcs
Load Resistance	5400 Pa (front) / 2400 Pa (rear)

TEMPERATURE RATINGS

Nominal Module Operating Temperature (NMOT)	45°C ± 2°C
Temperature Coefficient of PMAX	-0.30%/°C
Temperature Coefficient of VOC	-0.25%/°C
Temperature Coefficient of ISC	0.043%/°C

CURVE CHARACTERISTICS

