MEGATRON®

powering tomorrow intelligently



SF-M96/460 TIER 1

Bifacial N-Type Solar Module

The Megatron SF460 is a high-efficiency bifacial N-type half-cell solar module, built for reliable performance in residential, commercial and industrial systems. With excellent power output, long-term durability, and resistance to harsh environments, it's a dependable choice for modern solar energy needs.

Excellent temperature coefficient (Pmax): -0.30% / ° C

Excellent low-light performance: extended power generation up to 1H or so in the morning and evening

Has lower LID/LeTID attenuation

With a bifacial rate of 80% ± 5%, the bifacial power gain significantly reduces the LCOE as the backside is exposed to more light

Operating Parameters

Maximum System Voltage:	DC 1500V
Operating Temperature:	-40°C ~ 85°C
Max Overcurrent Protection Rating:	25A
Application Class:	Class A
Fire Safety Class:	Class C

Temperature Characteristics

Nominal Module Operating Temperature (NMOT):	DC 1500V
Operating Temperature:	-40°C ~ 85°C
Temperature Coefficient of Pmax:	-0.30% / °C
Temperature Coefficient of Voc:	-0.25% / °C
Temperature Coefficient of Isc:	+0.046% / °C

Mechanical Characteristics

Cell Type:	N-Type Bifacial
Module Dimensions:	1762 x 1134 x 30mm
Weight:	24.1 kg
Frame:	Aluminium Alloy (Silver)
Junction Box:	IP68 1500VDC, 3 schottky Bypass Diodes
Cables:	6.0mm² Positive (+) 300mm, Negative (-) 300mm, Or Customised Length
Connector / Type:	IP68 / MC4 or compatible
Packaging:	37 modules per pallet

10 YEARS **Guarantee**

20 YEARS **Warranty**

EU-28 WEEE COMPLIANT

Megatron Group Of Companies (Pty) Ltd

www.megatronsa.com

MEGATRON®
powering tomorrow intelligently

SF-M96/460 TIER 1

Bifacial N-Type Solar Module

STC - Electrical Characteristics

Irradiance at 1000W/㎡, Back Irradiance 135 W/m², Cell Temp 25 °C, Air Mass AM1.5

Rated Peak Power (Pmax):	460W
Maximum Power Voltage (Vmp):	30.31V
Maximum Power Current (Imp):	15.18A
Open Circuit Voltage (Voc):	36.25V
Short Circuit Current (Isc):	15.89A
Open Circuit Voltage Tolerance:	±3%
Short Circuit Current Tolerance:	±3%
Module Efficiency:	23.02%

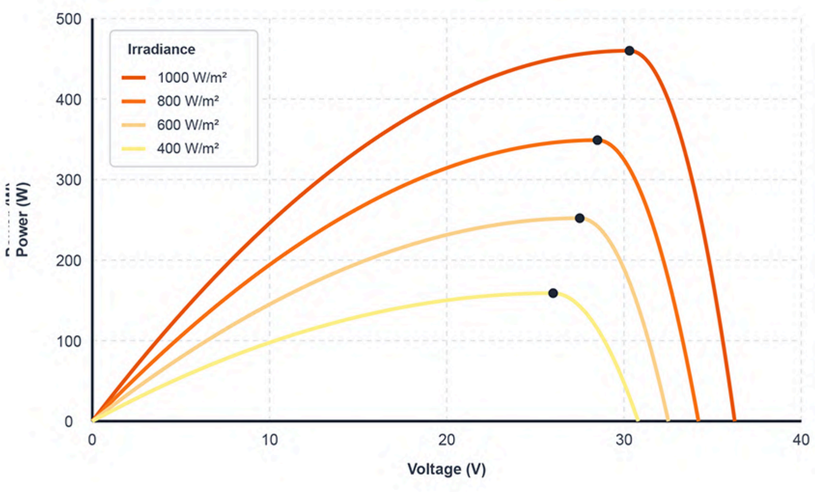
NOCT - Electrical Characteristics

Irradiance at 800 W/m², Back Irradiance 108 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s, Air Mass AM1.5

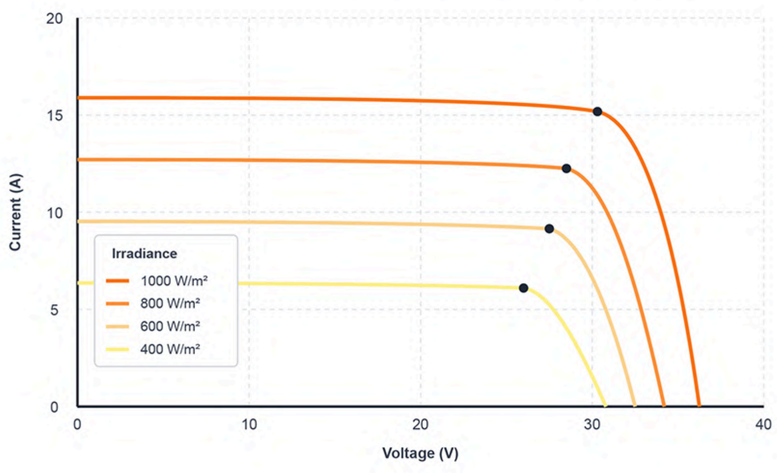
Peak Power (Pmax):	~346W (approx. 75% of STC)
Maximum Power Voltage (Vmp):	~28.50V
Maximum Power Current (Imp):	~12.14A
Open Circuit Voltage (Voc):	~34.20V
Short Circuit Current (Isc):	~12.71A
Module Efficiency:	21.85%
Short Circuit Current Tolerance:	±3%

Electrical Performance Curves

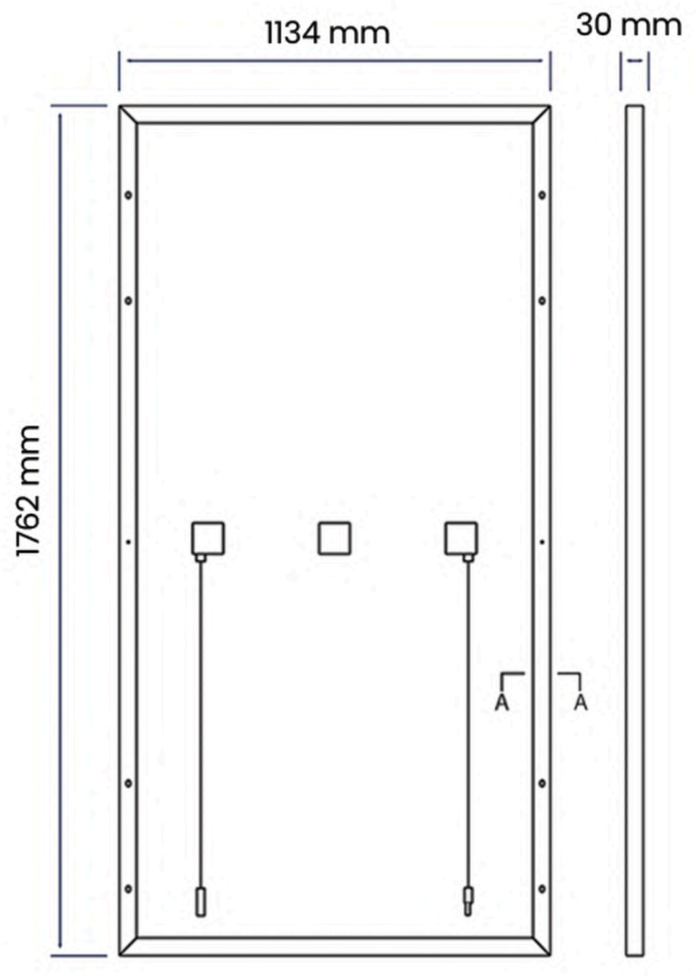
Power-Voltage (P-V) Curves at Various Irradiances



Current-Voltage (I-V) Curves at Various Irradiances



Dimensions



10 YEARS Guarantee

20 YEARS Warranty

EU-28 WEEE COMPLIANT

Megatron Group Of Companies (Pty) Ltd
www.megatronsa.com