



AFR-180M/12

180-Watt Monocrystalline
Photovoltaic Module

African Energy modules are made by some of the world's most sophisticated module manufacturers and are designed for Africa's off-grid solar charging and water pumping needs. The modules include efficient crystalline cells set in a solid aluminum frame and feature TÜV and IEC certification. With a 25 year warranty, these modules can provide power for several generations - and the quality is assured by African Energy's decade of experience in the solar industry.



ELECTRICAL CHARACTERISTICS at STC*

Maximum Power at STC (Pmax) [Wp]		180
Voltage at Pmax (Vmp)	[V]	19.5
Current at Pmax (Imp)	[A]	9.23
Open Circuit Voltage (Voc)	[V]	23.9
Short Circuit Current (Isc)	[A]	9.78
Fuse Rating	[A]	15
Maximum System Voltage		1000 Vdc
Power Tolerance		+5%

PHYSICAL CHARACTERISTICS

Solar Cells (mm)		Mono – 156.75 x 156.75
Number of Cells		36
Junction Box Protection Class		IP65
Connector		MC4 Compatible
Cables (Length [mm])		900/4
Dimension [mm]		1474x674x35mm
Weight [kg/lbs]		11/24.2

THERMAL CHARACTERISTICS

NOCT**		45 +/-2 °C
Temperature Coefficient of Pmax		-0.40% /°C
Temperature Coefficient of Voc		-0.32%/C
Temperature Coefficient of Isc		+0.05 %/°C
Operating Temperature		-40 to +85 °C

STC*: Irradiance of 1000W/m², AM1.5 Spectrum and Cell Temperature of 25 °C . NOCT**: Irradiance of 800W/m², ambient temperature 20 °C and wind speed 1 m/s

