



PERC | TECHNOLOGY
INSIDE

200 W 15.74 %

Maximum power

Maximum efficiency

KEY BENEFITS AND FEATURES



Power from **190 to 200 Watt**



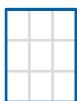
68 M6 **PERC** half-cut cells



Revamping series - Specifically designed for replacement of old photovoltaic modules



Module current approx. **5 Ampere** to fit with old 5 inch solar cells



Silver frame and white backsheet



1580 x 808 x 35 mm

Performance guarantee

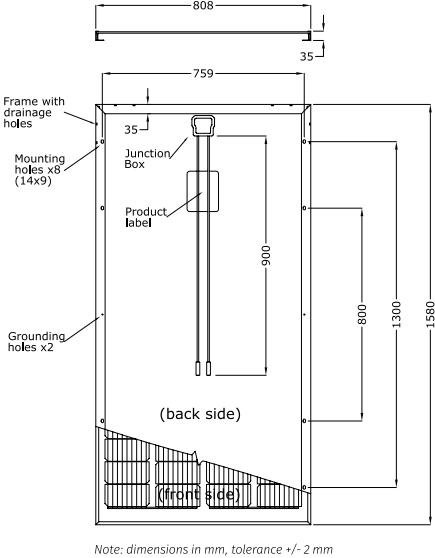
- **25-years** performance warranty with max power decrease from 2nd year **0.5%/year**
- **97%** at the end of first year
- **90%** at the end of 20th year
- **87%** at the end of 25th year

Product guarantees

- **15-year** product warranty
- Third-party product **liability** insurance
- All FuturaSun's modules are designed and guaranteed by the **Italian** headquarters

Mechanical Specifications

Dimensions	1580 x 808 x 35 mm
Weight	14 kg
Glass	High transmission, Low iron, Tempered, ARC, Thickness 3.2 mm
Cells	68 monocrystalline half-cut MBB PERC cells 166 x 83 mm
Frame	Anodized aluminium frame with mounting and drainage holes
Junction boxes	Certified according to IEC 62790, IP 68 approved, 3 bypass diodes
Cables	Solar cable, length 900 mm or customized assembled with 4mm² compatible connectors
Backsheet	Composite Multilayer film
Maximum reverse current (Ir)	20 A
Maximum system voltage	1000 V (1500 V on request)
Mechanical load (snow)	Design load: 3600 Pa, (5400 Pa including safety factor 1.5)
Mechanical load (wind)	Design load: 1600 Pa, (2400 Pa including safety factor 1.5)



Electrical data - STC*

FU 190 M

FU 200 M

Sorting tolerance	W	0/+5	
Module power (Pmax)	W	190	200
Open circuit voltage (Voc)	V	45.41	45.98
Short circuit current (Isc)	A	5.34	5.54
Maximum power voltage (Vmpp)	V	38.17	38.77
Maximum power current (Impp)	A	4.98	5.26
Module efficiency	%	14.96	15.74

Electrical data - NOCT**

FU 190 M

FU 200 M

Module power (Pmax)	W	144	151
Open circuit voltage (Voc)	V	42.84	43.39
Short circuit current (Isc)	A	4.20	4.36
Maximum power voltage (Vmpp)	V	35.75	36.31
Maximum power current (Impp)	A	4.02	4.17

Temperature ratings

Temperature coefficient Isc	%/°C	0.05
Temperature coefficient Voc	%/°C	-0.27
Temperature coefficient Pmax	%/°C	-0.35
NOCT**	°C	45
Operating temperature	°C	from -40 to +85

Certifications

Factory	ISO 9001 - 14001 - 45001
Product	IEC 61730, IEC EN 61215, IEC EN 61730, Fire Class C, Class 1 UNI9177, IEC EN 61701, IEC EN 62716

Packaging

Quantity / Pallet	31 - 36 pcs
Container 40' HC	938 pcs / 28 pallets

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*Standard Test Conditions STC: 1000 W/m² - AM 1.5 - 25 °C - tolerance: Pmax (±3%), Voc (±4%), Isc (±5%)
**Nominal Operating Cell Temperature NOCT: 800 W/m² - T=45 °C - AM 1.5