

n-type

TECHNOLOGY
INSIDE

590 W 22.84 %

Maximum power

Maximum efficiency

KEY BENEFITS AND FEATURES



Power from **570 to 590 Watt**



144 M10 **n-type** half-cut cells



The **new standard** in photovoltaic technology



High efficiency and enhanced low light performance



Excellent temperature coefficient **-0.29%/°C**



2278 x 1134 x 35 mm

Performance guarantee

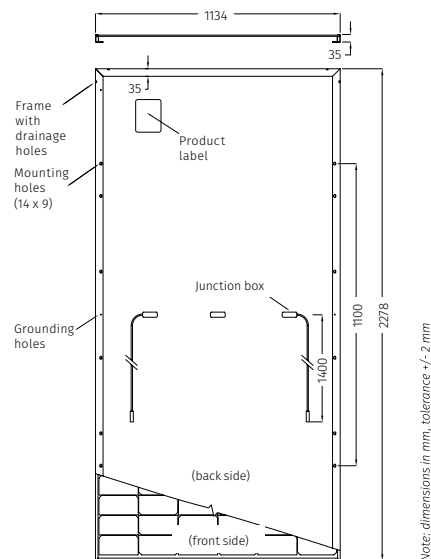
- **25-years** performance warranty with max power decrease from 2nd year **0.4%/year**
- **99%** at the end of first year
- **92%** at the end of 20th year
- **89%** at the end of 25th year

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	2278 x 1134 x 35 mm
Weight	28.2 kg
Glass	High transmission, Low iron, Tempered, ARC, Thickness 3.2 mm
Cells	144 monocrystalline half-cut MBB n-type cells 182 x 91 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 1400 mm or customized assembled with 4mm ² compatible connectors
Backsheet	Composite Multilayer film - white
Maximum reverse current (I _r)	25 A
Maximum system voltage	1500 V
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 570 MV	FU 575 MV	FU 580 MV	FU 585 MV	FU 590 MV
Sorting tolerance	W	0/+5				
Module power (P _{max})	W	570	575	580	585	590
Open circuit voltage (V _{oc})	V	50.72	50.86	51.00	51.14	51.28
Short circuit current (I _{sc})	A	14.32	14.40	14.48	14.56	14.64
Maximum power voltage (V _{mpp})	V	42.05	42.20	42.35	42.50	42.65
Maximum power current (I _{mpp})	A	13.56	13.63	13.70	13.77	13.84
Module efficiency	%	22.00	22.20	22.40	22.65	22.84

Electrical data - NOCT**

		FU 570 MV	FU 575 MV	FU 580 MV	FU 585 MV	FU 590 MV
Module power (P _{max})	W	429	433	436	440	444
Open circuit voltage (V _{oc})	V	48.19	48.31	48.45	48.59	48.73
Short circuit current (I _{sc})	A	11.56	11.63	11.69	11.75	11.82
Maximum power voltage (V _{mpp})	V	39.5	39.59	39.68	39.78	39.89
Maximum power current (I _{mpp})	A	10.86	10.93	11.00	11.07	11.13

Temperature ratings

Temperature coefficient I _{sc}	%/°C	0.045
Temperature coefficient V _{oc}	%/°C	-0.25
Temperature coefficient P _{max}	%/°C	-0.29
NOCT**	°C	45 ± 2
Operating temperature	°C	from -40 to +85

Certifications

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

Packaging

Quantity / Pallet	31 pcs
Container 40' HC	620 pcs / 20 pallets

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*Standard Test Conditions STC: 1000 W/m² - AM 1.5 - 25 °C - tolerance: P_{max} (±3%), V_{oc} (±4%), I_{sc} (±5%)
 **Nominal Operating Cell Temperature NOCT: 800 W/m² - T=45 °C - AM 1.5

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