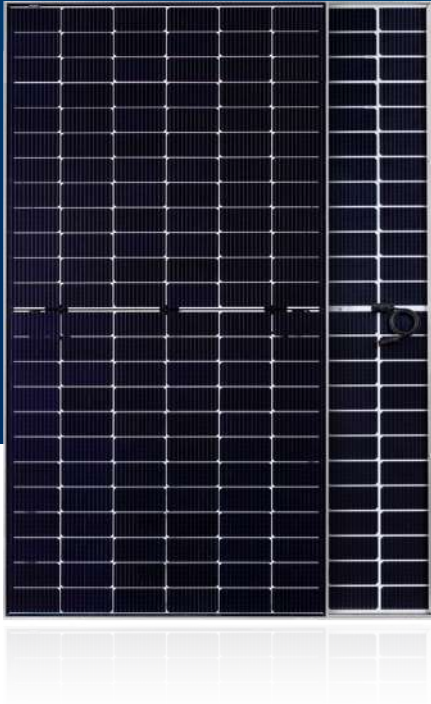


Velvet Pro



HJT | TECHNOLOGY
INSIDE

470 W **21.6 %**

Maximum power

Maximum efficiency

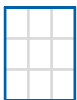
KEY BENEFITS AND FEATURES



Power **470 Watt**



144 M6 **HJT** bifacial half-cut cells



Silver frame and white-patterned back glass



Excellent temperature coefficient **-0.26 % / °C**



Optimised structure for low radiation and diffuse light



2094 x 1038 x 30 mm

Performance guarantee

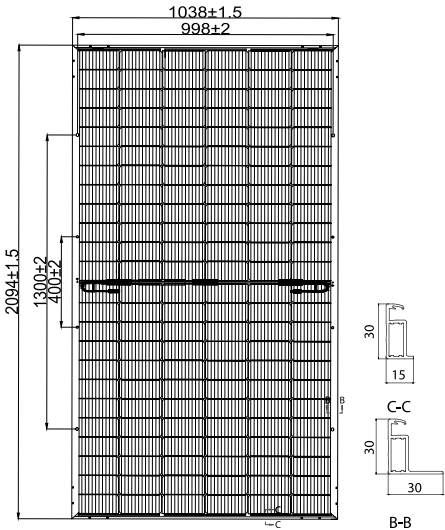
- **30-years** performance warranty with max power decrease from 2nd year **0.4%/year**
- **99%** at the end of first year
- **91%** at the end of 20th year
- **88%** at the end of 30th year

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	2094 x 1038 x 30 mm
Weight	27.5 kg
Glass	Front - 2.0 mm Solar glass with ARC Back - 2.0 mm Solar glass white grid
Cells	144 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 1200 mm or customized assembled with 4mm² compatible connectors
Back glass	White-patterned
Maximum reverse current (Ir)	20 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)



Note: dimensions in mm, tolerance +/- 2 mm

Electrical data

FU 470 MVL

TEST CONDITIONS		STC*	BSTC**
Module power (Pmax)	W	470	523
Open circuit voltage (Voc)	V	53.49	55.34
Short circuit current (Isc)	A	10.71	11.62
Maximum power voltage (Vmpp)	V	45.65	46.59
Maximum power current (Impp)	A	10.31	11.23
Module efficiency	%	21.60	24.06
Sorting tolerance	W	0/+5	

Electrical data - NOCT**

FU 470 MVL

Module power (Pmax)	W	356.90
Open circuit voltage (Voc)	V	49.39
Short circuit current (Isc)	A	8.60
Maximum power voltage (Vmpp)	V	43.13
Maximum power current (Impp)	A	8.27

Temperature ratings

Temperature coefficient Isc	%/°C	0.04
Temperature coefficient Voc	%/°C	-0.24
Temperature coefficient Pmax	%/°C	-0.26
NOCT**	°C	44 ± 2
Operating temperature	°C	from -40 to +85

Certifications

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

Packaging

Quantity / Pallet	36 pcs
Container 40' HC	792 pcs / 22 pallets

The information included in this module datasheet is subject to change without notice and is provided for informational purposes only. No contractual rights are established or should be inferred because of user's reliance on the information contained in this module datasheet. Please refer to the appropriate module user guide and module product specification document for more detailed technical information regarding module performance, installation and use.

*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
Notice: All data and specifications are preliminary and subject to change without notice.
2023 | EN_02