Silk® Nova All Black

FuturaSun® anticipate tomorrow



n-type | TECHNOLOGY INSIDE

480 W Maximum power

22.16 % Maximum efficiency

KEY BENEFITS AND FEATURES

- Power from **470** to **480 Watt**
- 120 M10 **n-type** half-cut cells
- Elegant **all black** front side design
- **High efficiency** and enhanced low light performance
- Excellent temperature coefficient **-0.29%/°C**
- 1910 x 1134 x 30 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

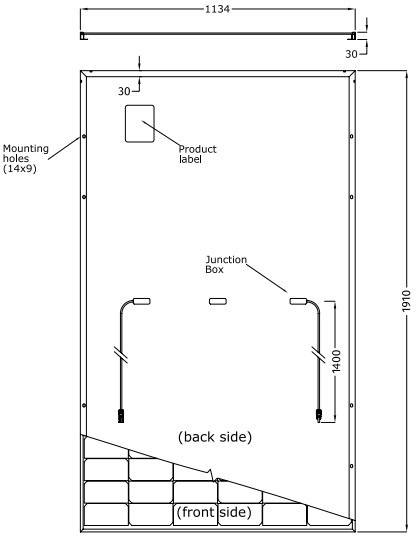
Product guarantees

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

All images shown are for illustration purpose only, product appearance may vary according to the installation, light and ambient reflection.

Mechanical Specifications

Dimensions	1910 x 1134 x 30 mm
Weight	22.4 kg
Glass	High transmission, Low iron, Tempered, ARC, transparent, 3.2 mm
Cells	120 monocrystalline half-cut MBB n-type cells 182 x 91 mm
Frame	Black 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 4mm² compatible connectors
Backsheet	Composite Multilayer film
Maximum reverse current (Ir)	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)



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

Electrical data - STC*		FU 470 MV	FU 475 MV	FU 480 MV
Sorting tolerance	W	0/+5		
Module power (Pmax)	W	470	475	480
Open circuit voltage (Voc)	V	42.62	42.76	42.90
Short circuit current (Isc)	A	14.10	14.18	14.26
Maximum power voltage (Vmpp)	V	35.30	35.45	35.60
Maximum power current (Impp)	A	13.34	13.41	13.49
Module efficiency	%	21.70	21.93	22.16

Electrical data - NOCT**		FU 470 MV	FU 475 MV	FU 480 MV
Module power (Pmax)	W	354,24	357.64	361.29
Open circuit voltage (Voc)	V	40.49	40.63	40.76
Short circuit current (Isc)	A	11.39	11.45	11.51
Maximum power voltage (Vmpp)	V	33.17	33.30	33.36
Maximum power current (Impp)	A	10.68	10.74	10.83

Temperature ratings

Temperature coefficient Isc	%/°C	0.045
Temperature coefficient Voc	%/°C	-0.25
Temperature coefficient Pmax	%/°C	-0.29
NOCT**	°C	45 ± 2
Operating temperature	°C	from -40 to +85

Certifications

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

Packaging

Quantity / Pallet	36 pcs
Container 40' HC	864 pcs / 24 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

EN_02

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For detailed information, please refer to the installation manual