

Silk[®] Nova Duetto All Black



n-type

TECHNOLOGY
INSIDE

420 W **21.5 %**

Maximum power

Maximum efficiency

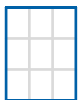
KEY BENEFITS AND FEATURES



Power from **410** to **420 Watt**



108 M10 **N-type bifacial** half-cut cells



Black frame and black-grid



Optimised frontal performance



Improved **long-life stability**



1722 x 1134 x 30 mm

Performance guarantee

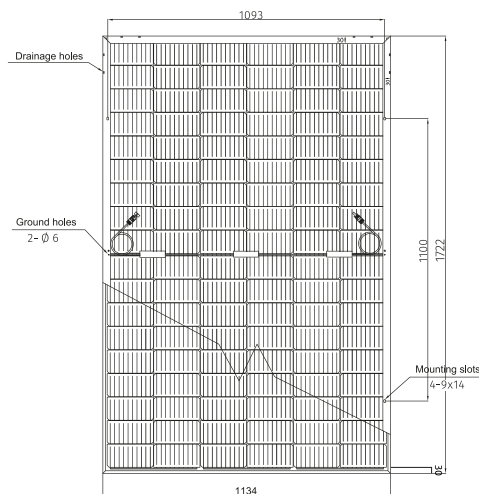
- **30-years** performance warranty with max power decrease from 1st year **0.4%/year**
- **99%** at the end of first year
- **92%** at the end of 20th year
- **87%** at the end of 30th year

Product guarantees

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

Mechanical Specifications

Dimensions	1722 x 1134 x 30 mm
Weight	25.4 kg
Glass	Front - 2.0 mm solar glass with ARC Back - 2.0 mm heat strengthened glass
Cells	108 monocrystalline half-cut MBB n-type bifacial 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 1100 mm or customized assembled with 4mm ² compatible connectors
Back glass	Black grid
Maximum reverse current (I _r)	30 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 410 MV		FU 415 MV		FU 420 MV	
TEST CONDITIONS		STC [*]	BSTC ^{**}	STC [*]	BSTC ^{**}	STC [*]	BSTC ^{**}
Module power (P _{max})	W	410	453.89	415	459.80	420	465.11
Open circuit voltage (V _{oc})	V	37.68	37.68	37.87	37.87	38.06	38.06
Short circuit current (I _{sc})	A	13.94	15.44	14.01	15.52	14.09	15.61
Maximum power voltage (V _{mpp})	V	31.11	31.11	31.30	31.30	31.49	31.49
Maximum power current (I _{mpp})	A	13.18	14.59	13.26	14.69	13.34	14.77
Module efficiency	%	21	23.2	21.3	23.5	21.5	23.8
Sorting tolerance	W	0/+5					

Electrical data - NOCT^{***}

		FU 410 MV		FU 415 MV		FU 420 MV	
Module power (P _{max})	W	308		312		316	
Open circuit voltage (V _{oc})	V	35.82		36.99		36.18	
Short circuit current (I _{sc})	A	11.24		11.31		11.38	
Maximum power voltage (V _{mpp})	V	29.03		29.19		29.32	
Maximum power current (I _{mpp})	A	10.62		10.69		10.77	

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 ongoing, IEC EN 61730 ongoing, Class 1 UNI9177

Packaging

Quantity / Pallet	36 pcs
Container 40' HC	936 pcs / 26 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%)
^{**}Bifacial Standard Test Conditions (BSTC) Front side irradiation 1000 Wp / sqm Back side reflection irradiation 135 Wp / sqm Ambient temperature 25 °C
^{***}Nominal Operating Cell Temperature NOCT: 800 W/m² - T=45 °C - AM 1.5

EN_07