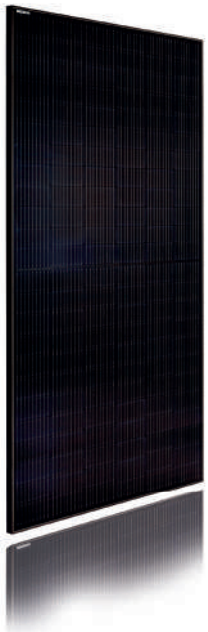
FuturaSun®
anticipate tomorrow



ALL BLACK

FU 420 / 425 / 430 / 435 / 440 M SILK® Pro

Monocrystalline Photovoltaic Module - 144 half-cut MBB cells

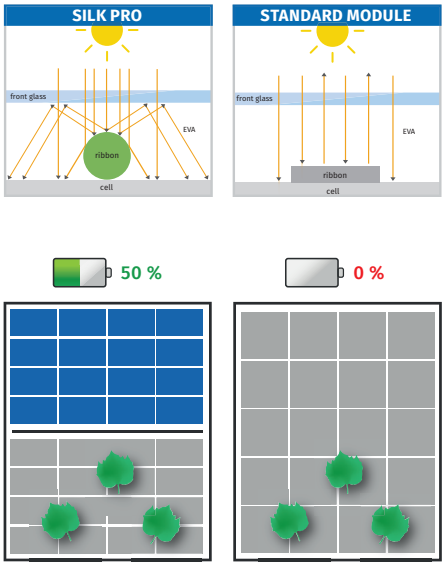
Engineered in Italy

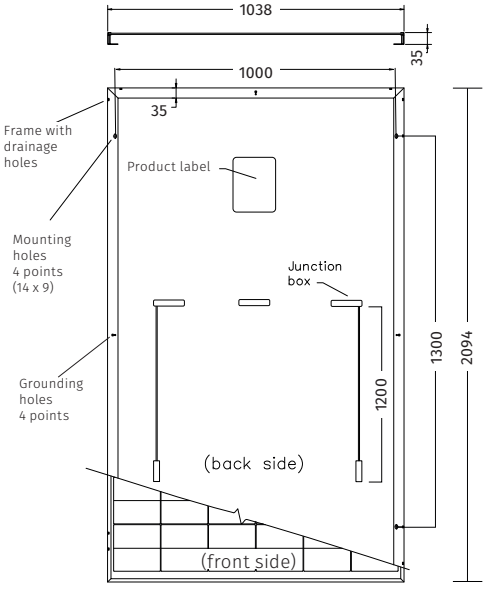
LIABILITY INSURANCE

- IEC 61215:2016 - IEC 61730:2016 & Factory Inspection
- Fire Resistance - Class C

GENERAL FEATURES

- **Total black look for particular architectural requirements**
- **15-year product warranty**
- **9 busbar 166 mm half-cut PERC cells**
- **High module efficiency up to 21.16%**
- **Less shades and more reflected light** to the cell thanks to the round ribbon
- **2 independent section** design secures a higher energy yield in case of shading
- **Lower risk of hot spot and micro cracks**
- **Improved low light performance**
- **Low NMOT,** improving the power generation efficiency
- **Half cut design in combination with multi busbar** reduce operating current and internal resistance





Note: dimensions in mm
tolerance +/- 2 mm

GUARANTEES

Performance guarantee

Max power decrease **0.5%**/year

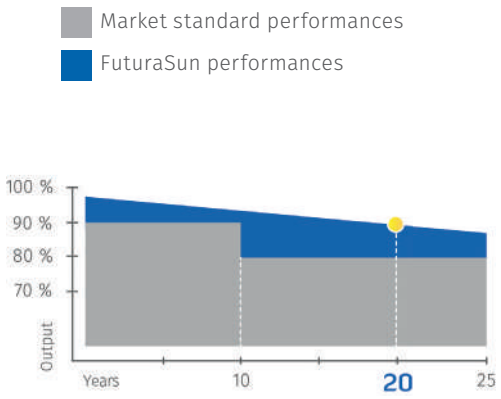
97% at the end of first year

90% at the end of 20th year NEW

87% at the end of **25th** year

Product guarantee

15 YEARS NEW



ELECTRICAL DATA

MODULE SILK® Pro		FU 420 M SILK® Pro	FU 425 M SILK® Pro	FU 430 M SILK® Pro	FU 435 M SILK® Pro	FU 440 M SILK® Pro
Standard Test Conditions STC: 1000 W/m² - AM 1.5 - 25 °C - tolerance: Pmax (±3%), Voc (±4%), Isc (±5%)						
Module power (Pmax)	W	420	425	430	435	440
Open circuit voltage (Voc)	V	48.30	48.50	48.7	48.90	49.10
Short circuit current (Isc)	A	11.05	11.11	11.17	11.24	11.30
Maximum power voltage (Vmpp)	V	40.12	40.33	40.53	40.74	40.94
Maximum power current (Impp)	A	10.47	10.54	10.61	10.68	10.75
Module efficiency	%	19.32	19.55	19.78	20.01	20.24
Nominal Module Operating Temperature NMOT: 800 W/m² - T=45 °C - AM 1.5						
Module power (Pmax)	W	312	316	320	323	327
Open circuit voltage (Voc)	V	45.24	45.43	45.62	45.80	45.99
Short circuit voltage (Isc)	A	8.93	8.98	9.02	9.08	9.13
Maximum power voltage (Vmpp)	V	37.83	38.02	38.21	38.41	38.60
Maximum power current (Impp)	A	8.25	8.30	8.36	8.41	8.47

TEMPERATURE RATINGS

Temperature coefficient Isc	%/°C	0.05
Temperature coefficient Voc	%/°C	-0.28
Temperature coefficient Pmax	%/°C	-0.35
NMOT *	°C	45
Operating temperature	°C	from -40 to +85

**Nominal Module Operating Temperature*

MECHANICAL SPECIFICATIONS

Dimensions	2094 x 1038 x 35 mm
Weight	23.6 kg
Glass	High transmission, Low iron, Tempered, ARC, Transparent, 3.2 mm
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Cells	144 monocrystalline half-cut PERC cells 166 x 83 mm
Backsheet	Black composite multilayer film
Frame	Black anodized aluminium frame with mounting and drainage holes
Junction box	Certified according to IEC 62790, IP 68 approved, 3 bypass diodes
Cables	Solar cable, length 1200 mm or customized assembled with MC4-compatible plugs
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)
Protection Class	II - accordance to IEC 61730

Authorized Dealer

2021_144m_420-440_Silk_Pro_AB_en

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