



**12
BUSBAR**

FU 290 / 295 / 300 P Silk

Polycrystalline Photovoltaic Module - 60 Cells

FU 310 / 320 / 330 M Silk

Monocrystalline Photovoltaic Module - 60 Cells

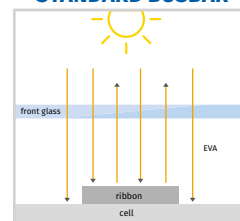
Engineered
in Italy



GENERAL FEATURES

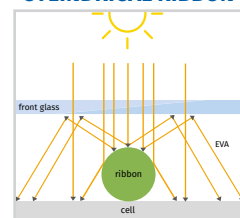
- 15-year product warranty
- 12 busbar high-efficiency cells
- **Less shades** thanks to the cylindrical ribbon
- **Reduced risk of hot spot**
- **More kWh per kWp**
- **Reduced electrical resistance**
- **Less mechanical stress** for the cell
- **Higher yield at low irradiance**
- Available also in **ALL BLACK** version

STANDARD BUSBAR

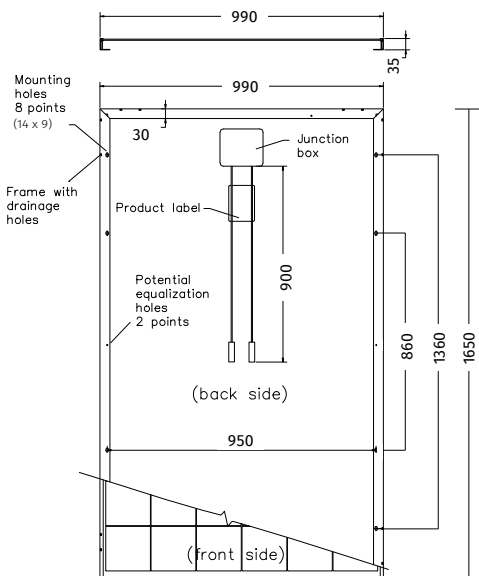


A high percentage of light is reflected externally from the ribbon

CYLINDRICAL RIBBON



Less reflected light and an increased current



Note: dimensions in mm
tolerance +/- 2 mm

GUARANTEES

Performance guarantee

Max power decrease **0.5%/year**

97% at the end of first year

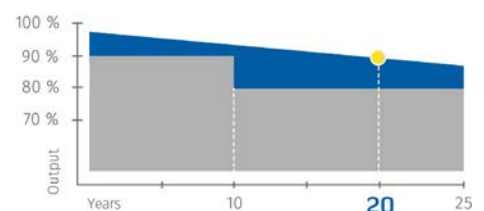
90% at the end of 20th year **NEW**

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

Product guarantee

15 YEARS **NEW**

- Market standard performances
- FuturaSun performances



ELECTRICAL DATA							
MODULE <i>Silk</i>	POLYCRYSTALLINE			MONOCRYSTALLINE			
	FU 290 P	FU 295 P	FU 300 P	FU 310 M	FU 320 M	FU 330 M	
Standard Test Conditions STC: 1000 W/sqm - AM 1.5 - 25 °C - tolerance: Pmax (±3%), Voc (±4%), Isc (±5%)							
Module power (Pmax)	W	290	295	300	310	320	330
Open circuit voltage (Voc)	V	39.59	39.89	40.19	40.78	40.92	40.97
Short circuit current (Isc)	A	9.35	9.40	9.45	9.72	9.84	9.96
Maximum power voltage (Vmpp)	V	32.60	32.90	33.10	33.15	33.75	34.35
Maximum power current (Impp)	A	8.90	8.97	9.06	9.36	10.91	11.92
Module efficiency	%	17.75	18.05	18.36	18.98	19.59	20.20

Nominal Module Operating Temperature NOCT: 800 W/mq - T=45 °C - AM 1.5							
Module power (Pmax)	W	214	217	221	229	236	243
Open circuit voltage (Voc)	V	36.50	36.70	36.95	37.10	37.5	37.9
Short circuit current (Isc)	A	7.57	7.61	7.65	7.84	7.94	8.04
Maximum power voltage (Vmpp)	V	30.00	30.30	30.60	31.00	31.70	32.40
Maximum power current (Impp)	A	7.13	7.16	7.22	7.39	7.44	7.50

TEMPERATURE RATINGS			
MODULE <i>Silk</i>		FU 290 P / FU 295 P / FU 300 P	FU 310 M / FU 320 M / FU 330 M
Temperature coefficient Isc	%/°C	0.06	0.05
Temperature coefficient Voc	%/°C	-0.295	-0.30
Temperature coefficient Pmax	%/°C	-0.38	-0.39
NOCT *	°C	45 ± 2°C	45 ± 2°C
Operating temperature	°C	from -40 to +85	from -40 to +85

* Nominal Operating Cell Temperature

MECHANICAL SPECIFICATIONS	
Dimensions	1650 x 990 x 35 mm
Weight	17.9 kg
Glass	Tempered, transparent, 3.2 mm
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Cells	60 cells 156.75x156.75 mm
Backsheet	Composite multilayer film
Frame	Anodized aluminium frame with mounting and drainage holes
Junction box	IP 65/IP 67
Cables	Solar cable, length 900 mm assembled with MC4-combinable plugs
Maximum reverse current (Ir)	15 A
Maximum system voltage	1000 V (1500 V on request)
Maximum load (wind/snow)	5400 Pa (including safety factor 1.5)
Protection Class	II - accordance to IEC 61730

Authorized Dealer



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