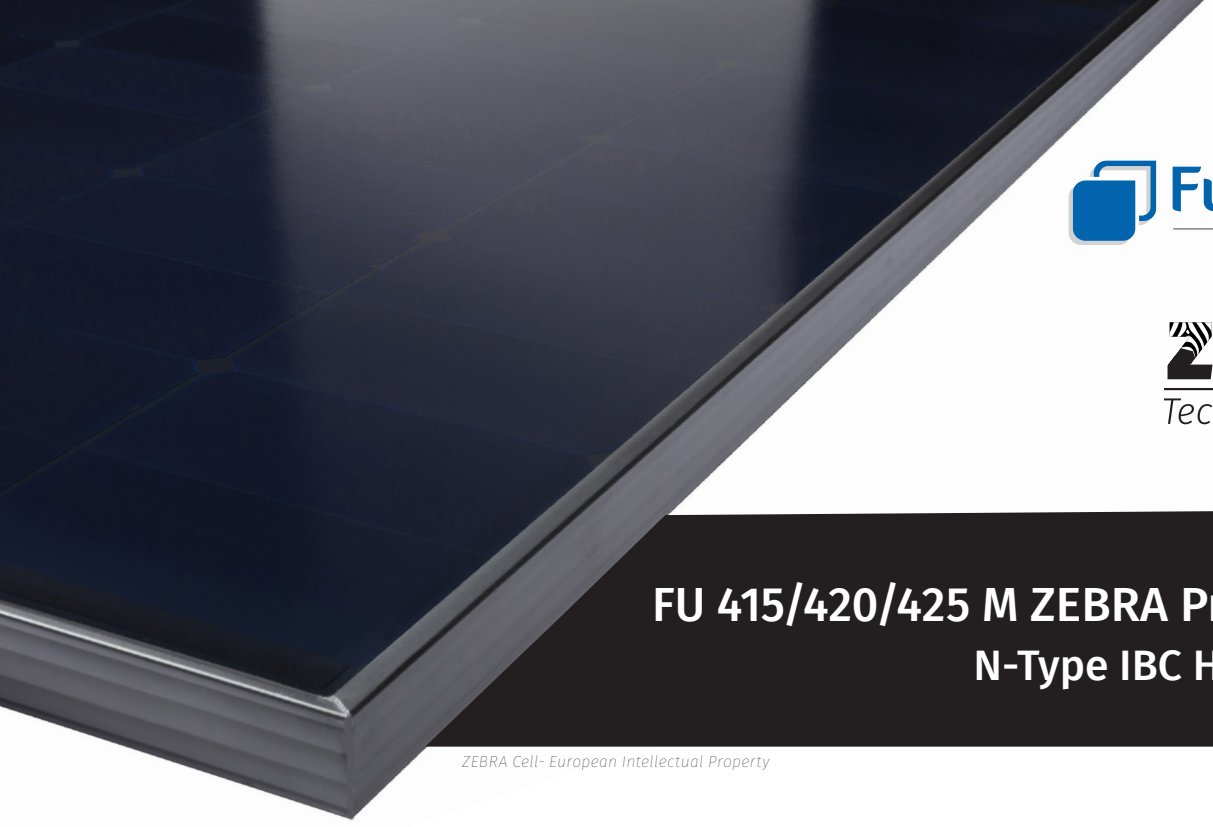


FuturaSun®
anticipate tomorrow

ZEBRA Pro
Technology Inside

FU 415/420/425 M ZEBRA Pro All Black
N-Type IBC Half-Cut cells

ZEBRA Cell- European Intellectual Property

PERFORMANCE GUARANTEE

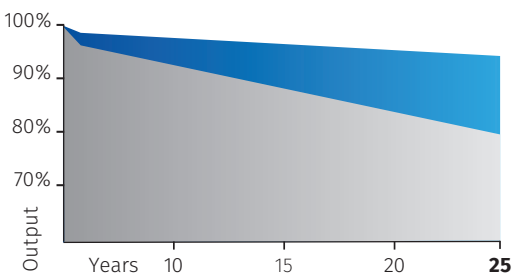
Max power decrease from 2nd year 0,25%/year
1st year degradation < 1.0 %
99 % at the end of 1th year
93 % at the end of 25th year

25 YEARS NEW PRODUCT GUARANTEE

415 - 425 Wp
POWER RANGE

-0.29 %/°C
TEMPERATURE COEFFICIENT

M6 — 166 mm
132 HALF-CUT IBC CELLS



Market standard performances
FuturaSun performances

GENERAL FEATURES & KEY BENEFITS

- 25-year product and performance warranty
- Elegant all black front side design
- Innovative ZEBRA Cell technology developed in Europe
- Up to 21.60 % module efficiency equal to 216,0 Wp/m²
- Excellent temperature coefficient -0.29 %/°C
- Improved low light performance
- Better yield at various tilts
- No shading on the cell thanks to IBC technology
- 2 independent section design secures a higher energy yield under shaded conditions
- Low Hot-Spot risk thanks to the distributed junction of the ZEBRA cell
- Resistant to LID (Light Induced Degradation) and LeTID (Light and elevated Temperature Induced Degradation)
- Long cable as standard suitable for landscape configurations

CERTIFICATIONS

IEC 61215:2016 - IEC 61730:2016

TÜVRheinland CERTIFIED
www.tuv.com
ID 1111257367

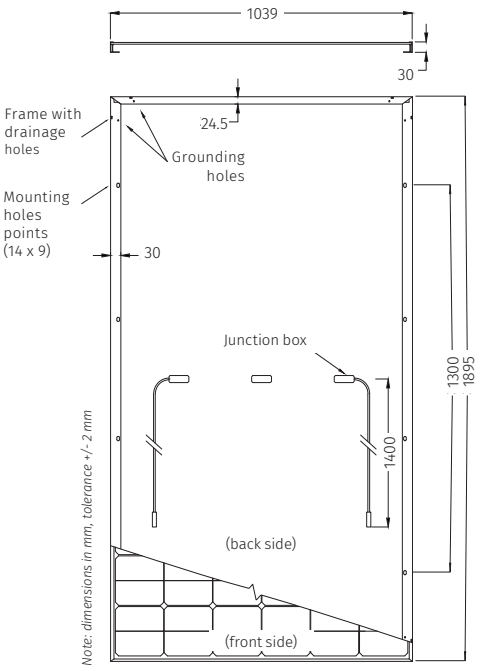
CE

For detailed information, please refer to the installation manual

ZEBRA Pro
Technology Inside

MECHANICAL SPECIFICATIONS

Dimensions	1895 x 1039 x 30 mm
Weight	21.0 kg
Glass	High transmission, Low iron, Tempered, ARC, Thickness, 3.2 mm
Cells	132 N-Type half-cut IBC cells 166 x 83 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 MC4-original plugs
Maximum reverse current (Ir)	20 A
Maximum system voltage	1500 V *(1000 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



ELECTRICAL DATA - STC*		FU 415 M	FU 420 M	FU 425 M
Module power (Pmax)	W	415	420	425
Open circuit voltage (Voc)	V	45.85	45.91	46.01
Short circuit current (Isc)	A	11.57	11.66	11.76
Maximum power voltage (Vmpp)	V	38.57	38.74	38.97
Maximum power current (Impp)	A	10.78	10.85	10.91
Module efficiency	%	21.1	21.3	21.6

ELECTRICAL DATA - NMOT**		FU 415 M	FU 420 M	FU425 M
Module power (Pmax)	W	312	316	320
Open circuit voltage (Voc)	V	43.90	44.00	44.1
Short circuit voltage (Isc)	A	9.33	9.41	9.49
Maximum power voltage (Vmpp)	V	36.00	36.2	36.40
Maximum power current (Impp)	A	8.67	8.73	8.80

TEMPERATURE RATINGS

Temperature coefficient Isc	%/°C	0.046
Temperature coefficient Voc	%/°C	-0.246
Temperature coefficient Pmax	%/°C	-0.290
NMOT**	°C	42 ± 2
Operating temperature	°C	from -40 to +85

PACKAGING INFORMATION

Quantity / Pallet	36 pcs
Container 40' HQ	900 pcs / 25 pallets

**Standard Test Conditions STC: 1000 W/m² - AM 1.5 - 25 °C - tolerance: Pmax (±3%). Voc (±4%). Isc (±5%)*
***Nominal Module Operating Temperature NMOT: 800 W/m2 - T=45 °C - AM 1.5*
Notice: All data and specifications are preliminary and subject to change without notice.

FuturaSun® anticipate tomorrow
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