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# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

**FuturaSun srl  
FU 340-350M Zebra All Black  
FU 350M Zebra All Black**

Also available on the web at  
[EnergyPal.com/futurasun-srl-solar-panels/fu-350m-zebra-all-black](http://EnergyPal.com/futurasun-srl-solar-panels/fu-350m-zebra-all-black)



**BACK CONTACT**

**FU 340 / 345 / 350 M Zebra - All Black**  
Monocrystalline Photovoltaic Module - 120 half-cut IBC cells



**GENERAL FEATURES**

- **IBC - Interdigitated Back Contact cells**
- Innovative **Zebra technology developed in Europe**
- **Superior module efficiency up to 20.69%**
- **Total black look** without ribbons on the cells
- **Excellent temperature coefficient -0.3%/°C**
- **Improved low light performance**
- **Immunity to LID** (Light Induced Degradation) **and LeTID** (Light and elevated Temperature Induced Degradation)
- **Half cut design** reduces internal resistance **increasing power output**
- **No shading on the cell** thanks to **IBC technology**
- **Maximum light absorption**

**CERTIFICATIONS**

- > **IEC 61215:2016 - IEC 61730:2016 & Factory Inspection\***
- > **Fire Resistance - Class 1**
- > **Salt Corrosion Resistance**  
IEC 61701
- > **PID Certified**  
2 PFG 2387/01.2018

**NEW**

**GUARANTEES**

**Performance guarantee**

Max power decrease **0.4%/year**

**1<sup>st</sup> year degradation - 1.0%**

**99% at the end of first year**

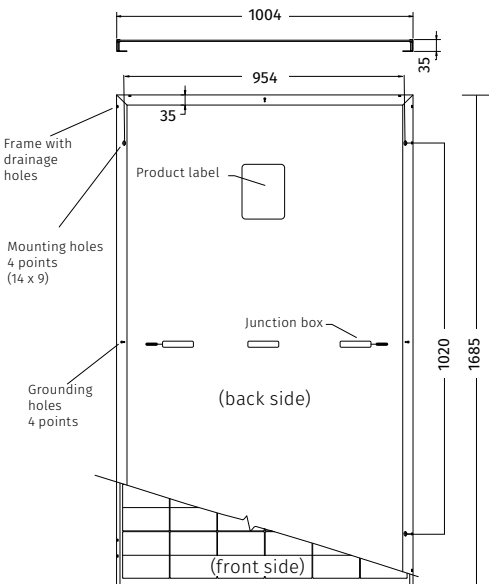
**89% at the end of 25<sup>th</sup> year**

**Product guarantee**

**15 YEARS**

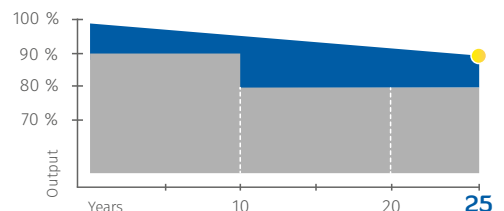
**NEW**

**NEW**



Note: dimensions in mm  
tolerance +/- 2 mm

Market standard performances  
FuturaSun performances



## ELECTRICAL DATA

MODULE ZEBRA		FU 340 M ZEBRA*	FU 345 M ZEBRA*	FU 350 M ZEBRA*
<i>Standard Test Conditions STC: 1000 W/sqm - AM 1.5 - 25 °C - tolerance: Pmax (±3%), Voc (±4%), Isc (±5%)</i>				
Module power (Pmax)	W	340	345	350
Open circuit voltage (Voc)	V	41.90	42.10	42.20
Short circuit current (Isc)	A	10.19	10.24	10.29
Maximum power voltage (Vmpp)	V	34.11	34.31	34.51
Maximum power current (Impp)	A	9.97	10.06	10.14
Module efficiency	%	20.10	20.40	20.69

<i>Nominal Module Operating Temperature NMOT: 800 W/mq - T=42 °C - AM 1.5</i>				
Module power (Pmax)	W	256	260	264
Open circuit voltage (Voc)	V	39.75	39.93	40.11
Short circuit current (Isc)	A	8.23	8.27	8.32
Maximum power voltage (Vmpp)	V	32.04	32.23	32.42
Maximum power current (Impp)	A	7.99	8.07	8.15

## TEMPERATURE RATINGS

Temperature coefficient Isc	%/°C	0.046
Temperature coefficient Voc	%/°C	-0.246
Temperature coefficient Pmax	%/°C	-0.300
NMOT **	°C	42 ± 2
Operating temperature	°C	from -40 to +85

\*Certification on going

\*\*Nominal Module Operating Temperature

## MECHANICAL SPECIFICATIONS

Dimensions	1685 x 1004 x 35 mm
Weight	19.5 kg
Glass	High transmission, Low iron, Tempered, Transparent, 3.2 mm
Cell encapsulation	POE (Polyolefin)
Cells	120 monocrystalline half-cut IBC cells 158.75 x 79.375 mm
Backsheet	Composite multilayer film
Frame	Black anodized aluminium frame with mounting and drainage holes
Junction box	Certified according to IEC 62790, IP 68 approved
Cables	Solar cable, length 1200 mm or customized assembled with MC4-compatible plugs
Maximum reverse current (Ir)	20 A
Maximum system voltage	1500 V (1000 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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