

# Solar Module 165 W for Off-Grid Applications



DESIGNED  
IN ITALY

IEC 61215:2016  
IEC 61730:2016  
& Factory  
Inspection

## Polycrystalline 36 cells

- **15-year product warranty**
- **High-efficiency cells** decrease ohmic losses and increase the yield
- **Tempered 3.2 mm safety glass** for optimal mechanical stability and transparency
- **High temperature resistance** (tested at 105° C for 200 hours)
- For installations **up to an altitude of 7000 m**
- **Maximum resistance against hail** (83 km/h)
- Quality control with **electroluminescence (EL) tests on each module**
- Water-repellent, high-transmittance and antireflection coating glass, **to increase yield and avoid dust deposition**

Designed in Italy · 8 Quality Certifications



## ELECTRICAL DATA

MODULE		FU 150 P	FU 155 P	FU 160 P	FU 165 P
Standard Test Conditions STC: 1000 W/sqm - AM 1.5 - 25 °C - tolerance: Pmax (±3%), Voc (±4%), Isc (±5%)					
Module power (Pmax)	W	150	155	160	165
Open circuit voltage (Voc)	V	22.75	23.05	23.4	23.45
Short circuit current (Isc)	A	8.6	8.67	8.73	8.8
Maximum power voltage (Vmpp)	V	18.4	18.9	19.4	19.4
Maximum power current (Impp)	A	8.14	8.2	8.25	8.51
Module efficiency	%	15.23	15.74	16.25	16.75

Nominal Module Operating Temperature NMOT: 800 W/mq - T=45 °C - AM 1.5

Module power (Pmax)	W	110.19	113.87	117.54	121.21
Open circuit voltage (Voc)	V	20.72	21.00	21.32	21.36
Short circuit current (Isc)	A	6.88	6.94	6.99	7.04
Maximum power voltage (Vmpp)	V	16.83	17.29	17.75	17.75
Maximum power current (Impp)	A	6.67	6.72	6.76	6.97

## TEMPERATURE RATINGS

Temperature coefficient Isc	%/°C	0.0474
Temperature coefficient Voc	%/°C	-0.285
Temperature coefficient Pmax	%/°C	-0.37
NMOT *	°C	45
Operating temperature	°C	from -40 to +85

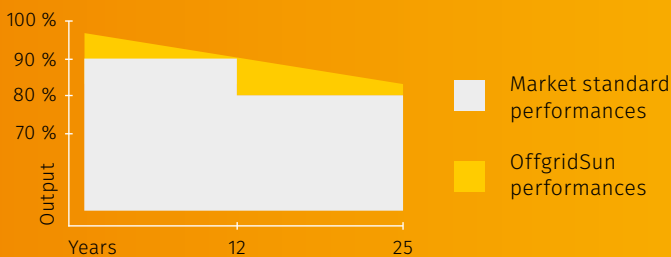
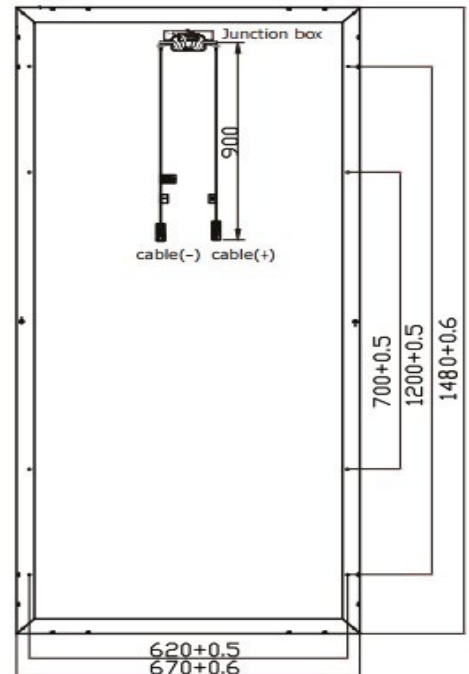
\* Nominal Operating Cell Temperature

## MECHANICAL SPECIFICATIONS

Dimensions	1480 x 670 x 30 mm
Weight	10.5 kg
Glass	Tempered, transparent, 3.2 mm
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Cells	36 polycrystalline cells 156 x 156 mm
Backsheet	Composite multilayer film
Frame	Anodized aluminium frame with mounting and drainage holes
Junction box	Certified according to IEC 62790, IP 68 approved
Cables	900 mm, assembled with MC4-combinable plugs

## CERTIFICATIONS

- IEC 61215, IEC 61730 & Factory Inspection 2016 NEW
- IEC 668-2-68:1994-08 Dust & Sand Resistance
- IEC61701:2011 Salt Spray Corrosion Resistance
- PID Test: Class A Potential Induced Degradation
- Fire Resistance: Class 1
- IEC 62716:2013 Ammonia Corrosion



### Performance guarantee

- Max power decrease: 0.7%/year over a 25 year module duration.
- 97% at the end of first year
  - 90% at the end of 12<sup>th</sup> year
  - 82% at the end of 25<sup>th</sup> year

### Product guarantee

12 years

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