

54-cell polycrystalline module family

PCBxxx-A21 / PCBxxx-A15



Characteristics

Dimensions

Length	1480mm (tolerance +/-3mm)
Width	985mm (tolerance +/-3mm)
Depth	46mm
Weight	19kg

Standard operating conditions*

Standard operating conditions*	Avoid excess exposure to smoke, dust, saltwater
Maximum system voltage	DC1000V

Insulation performance

Insulation resistance	50 MΩ at 500 VDC
Ability to withstand voltage	3000V for 1 minute

Thermal characteristics

NOCT	47°C
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Temperature coefficient

	PCBxxx-A21	PCBxxx-A15
Voc(Open circuit voltage)	- 0.32% / °C	- 0.36% / °C
Isc(Short circuit current)	+0.08% / °C	+0.05% / °C
Pmax(Maximum power output)	- 0.38% / °C	- 0.46% / °C

*maximum performance limits conform to IEC 61215 standards



Design Features:

Maximized Power Output

- Polycrystalline cells with 15.2% efficiency give highest power output even in low light conditions
- Individual cell outputs matched for optimal module performance
- Highly transparent glass maximizes energy yield

Robust, Reliable Construction

- Extra thick 46mm anodized aluminium frame
- Strengthened glass and protective back sheet prevent damage and water ingress
- Junction box filled with silicon gel
- Gasket provides extra protection against water ingress

Highest Quality Standards

- Module production conforms to the standards of IEC 61215 and IEC61730**
- Manufactured in Japan, certified according to ISO9001:2000***
- Every YOCASOL module is inspected visually and tested electrically before delivery
- IP protection: IP65

Seamless System Integration

- Fitted with standard MC3 connectors and a cable of about 1m
- 3 bypass diodes in junction box to minimize system power loss caused by shading of module

Warranty

In accordance with our limited warranty conditions

- Materials & Workmanship - 5 years
- 90% of the specified min. output power - 10 years
- 80% of the specified min. output power - 25 years

Eco -Friendly

- Using Lead-Free solder

Certification

- Module Certificates
** IEC61215 ed2, IEC61730, CE
- Factory Certificates
*** ISO9001:2000



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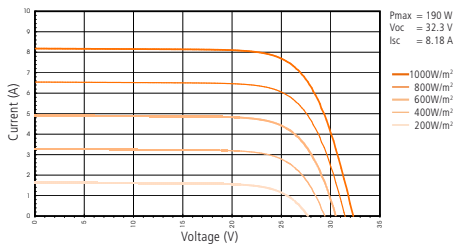
PCBxxx-A21 / PCBxxx-A15

Electrical Characteristics

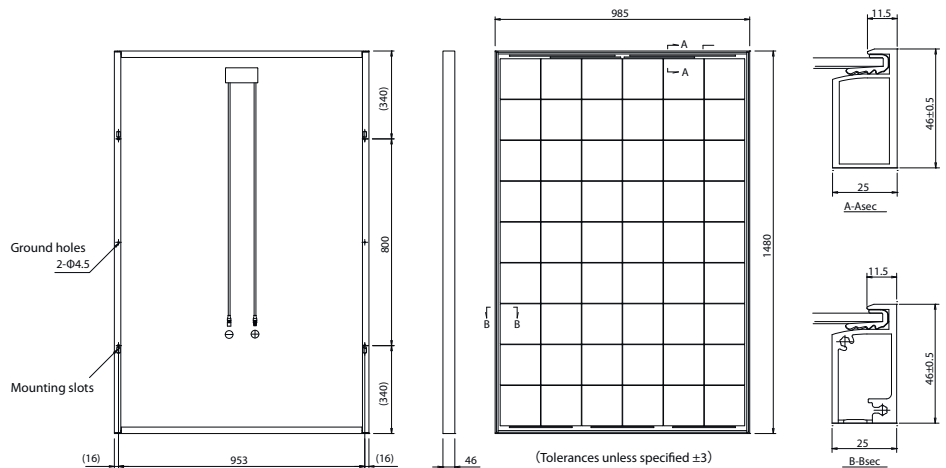
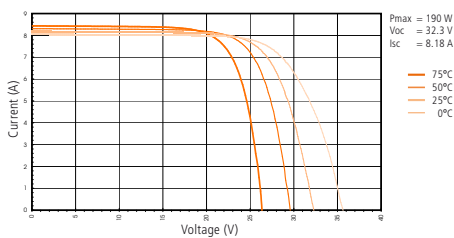
	PCB180	PCB185	PCB190	PCB195	PCB200	tolerance
At standard test conditions of 1000W/m ² irradiance, AM1.5 spectrum, 25°C cell temperature (STC)						
Maximum output	180W	185W	190W	195W	200W	+5% -3%
Maximum power voltage	25.6V	25.7V	25.8V	26.0V	26.2V	-
Maximum power current	7.03A	7.20A	7.36A	7.50A	7.63A	-
Open circuit voltage	32.0V	32.1V	32.3V	32.5V	32.7V	±10%
Short circuit current	8.04A	8.11A	8.18A	8.27A	8.36A	90% or over
Conversion efficiency	12.3%	12.7%	13.0%	13.4%	13.7%	-
Maximum reverse current	10A	10A	10A	10A	10A	-

At nominal operating cell temperature of 800W/m ² irradiance, AM1.5 spectrum, 20°C ambient temperature, 1m/s wind speed (NOCT)						
Maximum output	127W	130W	134W	137W	141W	-
Maximum power voltage	22.3V	22.4V	22.5V	22.6V	22.8V	-
Maximum power current	5.67A	5.81A	5.94A	6.05A	6.15A	-
Open circuit voltage	28.3V	28.4V	28.6V	28.7V	28.9V	-
Short circuit current	6.43A	6.49A	6.55A	6.62A	6.69A	-

Nominal PCB190 Output Curves @25°C



Nominal PCB190 Output Curves @1000W/m²



Construction

item	number	comment
cell	54	156mm x 156mm polycrystalline, Motech, Q-cells
front cover	1	strengthened patterned glass t3.2
back cover	1	white
filler		EVA resin
frame	1	46mm clear anodized aluminium
edge filler		gasket
+ output wire	1	eco 4sq, MC3 connector
- output wire	1	eco 4sq, MC3 connector
junction box	1	58 x 125 x 15, IP65
bypass diode	3	1000V

Tested Operating Conditions

temperature	-40°C - +85°C*
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* This temperature range was applied during the Temperature Cycle Test



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