

YL 185 P-23b / 1310x990 SERIES

YL 165 P-23b . YL 170 P-23b . YL 175 P-23b
YL 180 P-23b . YL 185 P-23b



ABOUT YINGLI SOLAR

Yingli Solar is a vertically integrated manufacturer of solar photovoltaic modules. Under one roof we manufacture our ingots, wafers, cells and modules. This ensures that we can tightly control our material and production quality, offering our customers leading product durability and sustainable performance backed by our 25 year limited power warranty*.

PERFORMANCE

- >> High efficiency, polycrystalline solar cells with high transmission and textured glass delivering a module series efficiency of up to 14.3%, minimising installation costs and maximising the kWh output of your system per unit area.
- >> Power tolerance of +/-3% minimising PV system mismatch losses.

QUALITY & RELIABILITY

- >> 3 busbars cells with higher efficiency and better collection of electrons increase module power output.
- >> Robust, corrosion resistant aluminium frame independently tested to withstand wind loads of 2.4KPa and snow loads of 5.4KPa ensuring a stable mechanical life for your modules.
- >> Take confidence in our modules with a 5 year limited product warranty and a 25 year limited power warranty*.
- >> Modules protected by box during transportation and with 20 modules in a box on-site waste is minimised.
- >> Manufacturing facility certified to ISO 9001 Quality Management System standards.

WARRANTIES

5-year limited product warranty*

Limited power warranty*: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output

QUALIFICATIONS AND CERTIFICATES

IEC 61215 Edition 2, IEC 61730 , CE, ISO 9001



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection



* In compliance with our Warranty Terms and Conditions

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ELECTRICAL PARAMETERS

Electrical parameters at STC (1,000 W/m², 25°C, AM 1.5 according to EN 60904-3)

Module type	YL 165 P-23b	YL 170 P-23b	YL 175 P-23b	YL 180 P-23b	YL 185 P-23b	
Power output	[W]	165.0	170.0	175.0	180.0	185.0
Power output tolerances	[%]	+/- 3	+/- 3	+/- 3	+/- 3	+/- 3
Module Efficiency	[%]	12.7	13.1	13.5	13.9	14.3
Voltage at Pmax, V_{mpp}	[V]	23.0	23.0	23.0	23.0	23.5
Current at Pmax, I_{mpp}	[A]	7.17	7.39	7.61	7.83	7.87
Open circuit voltage V_{oc}	[V]	29.0	29.0	29.0	29.5	29.5
Short circuit current I_{sc}	[A]	7.90	8.10	8.20	8.30	8.45
Max. system Voltage	[V]	1,000 VDC				

Parameters of the thermal characteristics

NOCT (Nominal Operating Cell Temperature)	[°C]	46 +/- 2
Temperature coefficient beta of I_{sc}	[1/K]	+ 0.0006
Temperature coefficient alpha of V_{oc}	[1/K]	- 0.0037
Temperature coefficient gamma of P_{mpp}	[1/K]	- 0.0045

MECHANICAL PARAMETERS

Dimensions (length [mm] / width [mm] / thickness [mm])	1,310 / 990 / 50
Thickness with junction box [mm]	50
Weight [kg]	15.8
Junction box (manufacturer / protection degree / number of diodes)	CIXI / IP65 / 6
Junction box dimensions (length / width / thickness [mm])	151 / 122 / 25
Positive cable & negative cable (length [mm] / cross-section [mm²])	900 / 4.0
Plug connector (manufacturer / type / protection degree)	MC4 / UV resistance and self-locking / IP67
Front cover (material / thickness [mm])	Tempered Glass, 3.6mm
Cell type (quantity / technology / cell size [mmxmm])	48 / polycrystalline 3 busbars / 156 x 156
Encapsulation materials	Ethylene Vinyl Acetate (EVA)
Rear cover (material / thickness [mm])	Polyester laminated film / 0.287
Frame (material)	robust anodized aluminum alloy

OPERATING CONDITIONS

Operating temperature [°C]	- 40 to + 85
Max. wind load / Max. snow load [Pa]	2.4K / 5.4K
Application Class	Class A

PACKAGING

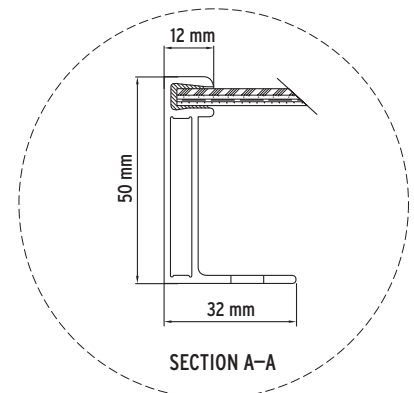
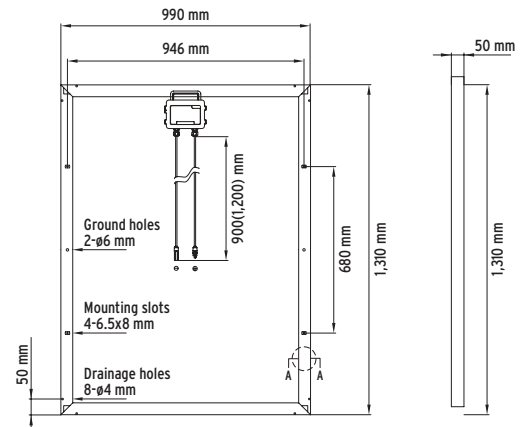
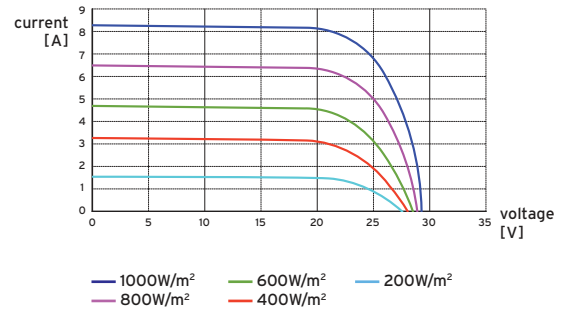
Number of modules per box	20
Box size (length [mm] / width [mm] / depth [mm])	1,380 / 1,140 / 1,165
Box Gross weight in kg	365
Boxes per pallet	1

* The data does not refer to a single module and they are not part of the offer, they serve for comparison only to different module types.

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Subject to modifications and errors

IV CURVES



Electrical equipment, check with your installer

