

YL235P-29b-PC SERIES



YL225P-29b-PC
YL230P-29b-PC
YL235P-29b-PC



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

REAL POWER. INDEPENDENTLY VERIFIED.

The new standard of confidence in Photovoltaics

Yingli Solar is currently the only manufacturer in the world to offer solar modules that are independently "Power Controlled" by TÜV Rheinland.

WHAT DOES THIS MEAN?

"Power Controlled" represents independent verification that the modules produced by Yingli Solar meet our nameplate power ratings and fall within our stated tolerance of +/- 3%.

With independent verification of nameplate power provided by "Power Controlled", you can rest assured that the power you receive is the power we promise...

Just one more reason to trust in Yingli Solar.

WARRANTIES

5-year limited product warranty¹
Limited power warranty²: 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 Ed. 2, IEC 61730 Class A, TÜV Power Controlled, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, MCS, CE



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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 warranty².

PERFORMANCE

- » High efficiency, polycrystalline solar cells with high transmission and textured glass delivering a module series efficiency of up to 14.4%, 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

- » 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 warranty².
- » Modules protected by box during transportation and with 20 modules in a box on-site waste is minimised.
- » Modules independently tested to ensure conformance with certification and regulatory standards.
- » Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.

¹ Valid 1st April 2010

² 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		YL225P-29b-PC	YL230P-29b-PC	YL235P-29b-PC
Power output	[W]	225.0	230.0	235.0
Power output production tolerances	[%]	+/- 3	+/- 3	+/- 3
Module efficiency	[%]	13.8	14.1	14.4
Voltage at Pmax, V _{mpp}	[V]	29.5	29.5	29.5
Current at Pmax, I _{mpp}	[A]	7.63	7.80	7.97
Open circuit voltage V _{oc}	[V]	36.5	37.0	37.0
Short circuit current I _{sc}	[A]	8.28	8.40	8.54
Limiting reverse current I _r	[A]		15	
Max. system voltage	[V]		1,000 VDC	

Electrical parameters at NOCT (800 W/m², AM 1.5, wind velocity 1m/s, Tamb 20°C)

NOCT (Nominal Operating Cell Temperature)	[°C]	46 +/- 2		
Voltage at Pmax, V _{mpp}	[V]	26.5	26.5	26.5
Current at Pmax, I _{mpp}	[A]	6.14	6.28	6.41
Open circuit voltage V _{oc}	[V]	33.4	33.8	33.8
Short circuit current I _{sc}	[A]	6.71	6.80	6.92

Thermal characteristics

Temperature coefficient beta of I _{sc}	[%/K]		+ 0.06
Temperature coefficient alpha of V _{oc}	[%/K]		- 0.37
Temperature coefficient gamma of P _{mpp}	[%/K]		- 0.45

MECHANICAL PARAMETERS

Dimensions (length [mm] / width [mm] / thickness [mm])	1,650 / 990 / 50		
Frame height [mm]	50		
Weight [kg]	19.8		
Front cover (material / thickness [mm])	Tempered Glass, 3.2mm		
Cell type (quantity / technology / dimensions)	60 / Polycrystalline / 156 x 156		
Encapsulation materials	Ethylene Vinyl Acetate (EVA)		
Rear cover (material)	Laminated Polymer Plastic		
Frame (material)	Robust Anodized Aluminum Alloy		

Junction box, cable & connector configurations

	Each configuration (CIXI/YITONG) is available with 2 different connector types each			
Junction box (manufacturer / protection degree)	CIXI / IP65		YITONG / IP65	
Junction box dimensions (length / width / thickness [mm])	151 / 122 / 25		147 / 137 / 28	
Positive cable & negative cable (manufacturer / length [mm] / cable cross-section [mm ²])	CIXI / 1200(900) / 4.0		XINHONGYE / 1200(900) / 4.0	
Connector (manufacturer / type / protection degree)	CIXI / CIXI / IP67	MC / MC4 / IP67	YITONG / YT08-1 / IP65	MC / MC4 / IP67

OPERATING CONDITIONS

Operating temperature [°C]	- 40 to + 85
Max. wind load / Max. snow load [Pa]	2.4K / 5.4K
Reduction of efficiency from an irradiance of 1,000 W/m ² to 200 W/m ² (T _{module} = 25 °C) according to EN 60904-1	5%

PACKAGING

Number of modules per box	20
Box size (length / width / depth [mm])	1,710 / 1,150 / 1,190
Box Gross weight in kg	450
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.

Subject to modifications and errors

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Electrical equipment, check with your installer

Before installation, please check the installation manual provided with the product.

