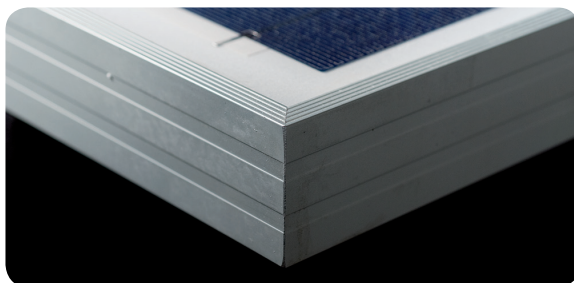
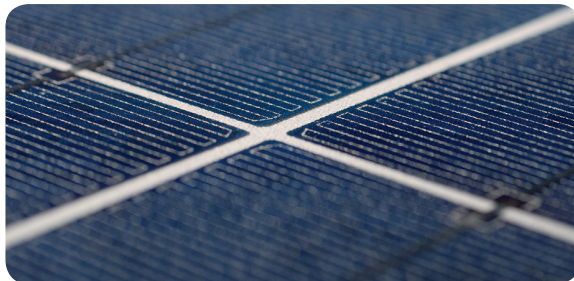


YL230P-29b

YINGLI 230 WATT MODULE



OUR COMPANY

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, multicrystalline solar cells with high transmission and textured glass deliver a module series efficiency of 14.1%, minimizing installation costs and maximizing the kWh output of your system per unit area.
- >> Power tolerance of +/-3%, minimizing PV system mismatch losses.

QUALITY & RELIABILITY

- >> Robust, corrosion resistant aluminium frame independently tested to withstand wind loads of 50 psf 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 minimized.
- >> Modules independently tested to ensure compliance with certification and regulatory standards.
- >> Manufacturing facility certified to ISO9001 Quality Management System standards.

WARRANTIES

5-year limited product warranty*
Limited power warranty*: 10 years at 90% of the minimum rated power output, 25 years at 80% of the minimum rated power output

QUALIFICATIONS & CERTIFICATES

IEC61215, IEC61730, UL1703, Class C Fire Rating, ISO9001



* In compliance with our Warranty Terms and Conditions

YINGLI 230W MODULE (YL230P-29b)

ELECTRICAL PARAMETERS

Electrical parameters at STC (1000 W/m², 25°C, AM 1.5G according to EN 60904-3)

Power output, P _{max}	[W]	230.0
Power output tolerances	[%]	+/- 3
Module efficiency	[%]	14.1
Voltage at Pmax, V _{mpp}	[V]	29.5
Current at Pmax, I _{mpp}	[A]	7.80
Open-circuit voltage V _{oc}	[V]	37.0
Short-circuit current I _{sc}	[A]	8.40
Max. system voltage	[V]	UL: 600 V DC ; IEC: 1,000 V DC
Max. series fuse rating	[A]	15

THERMAL PARAMETERS

NOCT (Nominal Operating Cell Temperature)	[°C]	46 +/- 2
Temperature coefficient of the short-circuit current I _{sc}	[% / °C]	+ 0.06 +/- 0.01
Temperature coefficient of the open-circuit voltage V _{oc}	[% / °C]	- 0.37 +/- 0.02
Temperature coefficient of the MPP power P _{mpp}	[% / °C]	- 0.45 +/- 0.05
Temperature coefficient of the MPP voltage V _{mpp}	[% / °C]	-0.49 +/- 0.02
Temperature coefficient of the MPP current I _{mpp}	[% / °C]	-0.05 +/- 0.01

MECHANICAL PARAMETERS

Dimensions (length / width / thickness [in])	65.0 / 39.0 / 2.0
Thickness with junction box [in]	2.0
Weight [lbs]	43.7
Junction box (protection degree / number of diodes)	IP65 / 6
Junction box dimensions (length / width / thickness [in])	6.0 / 4.8 / 1.0
Positive USE-2 cable (length [in] / AWG)	47.2 / 12
Negative USE-2 cable (length [in] / AWG)	47.2 / 12
Plug connector (type / protection degree)	MC4 Locking Connector (UV Resistant) / IP65
Front cover (material / thickness [mm])	Tempered glass / 3.2mm
Cell type (quantity / technology / length / width [in])	60 / Polycrystalline / 6.14 x 6.14
Frame (material / color)	Robust anodized aluminum alloy / Silver

OPERATING CONDITIONS

Operating temperature [°C]	-40 to +90
Max. wind load [psf]	50
Max. snow load [psf]	113

PACKAGING

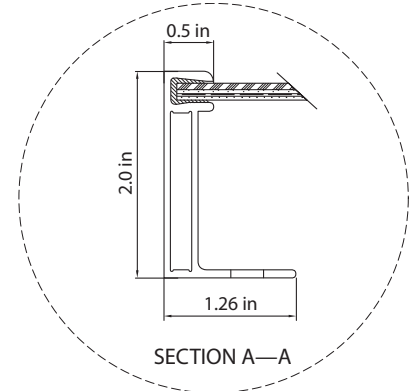
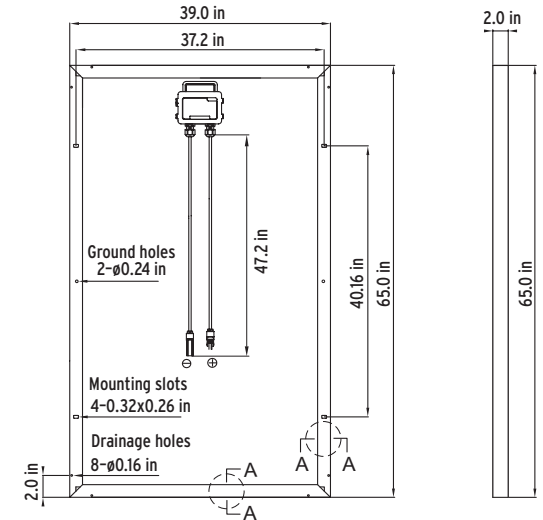
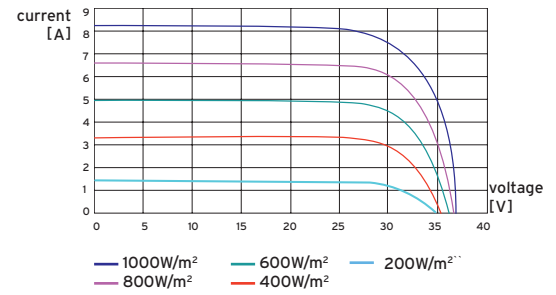
Number of modules per pallet box	20
Box size (length / width / depth [in])	70 / 44 / 40
Box weight [lbs]	917

Yingli Green Energy Americas, Inc.
us-info@yinglisolar.com

Tel: +1 (888) 686-8820

Specifications included in this datasheet are representative values and serve only for comparisons of different module types. Specifications are subject to change without notice.

I-V CURVES



Solar modules are electrical generating equipment, and should only be handled or installed by professionals. Read the instruction manual in its entirety before handling, installing, and operating Yingli modules.