

YGE 60 CELL SERIES

YL250P-29b **NEW!**
YL245P-29b
YL240P-29b
YL235P-29b
YL230P-29b



U.S. Soccer Powered by Yingli Solar



COMPANY

Yingli Green Energy (NYSE:YGE) is one of the world's largest fully vertically integrated PV manufacturers. With over 3.6 GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance. Founded in 1998, Yingli Green Energy serves customers through our U.S. subsidiary, Yingli Americas, co-headquartered in New York and San Francisco. We are the first renewable energy company to sponsor the U.S. National Soccer teams and the FIFA World Cup™.

PERFORMANCE

- Industry leading in-house manufacturing of polysilicon, ingots, wafers, cells and modules ensures tight control of our material and production quality.
- High performance, multicrystalline solar cells deliver a module series efficiency of up to 15.3%, reducing installation costs and maximizing the kWh output per unit area.
- Tight positive power tolerance of -0W to +5W ensures modules are delivered at or above rated power, improving system performance through the reduction of module mismatch loss.

QUALITY & RELIABILITY

- Robust, corrosion resistant aluminum frame independently tested to withstand wind and snow loads of up to 50 psf and 113 psf, respectively, ensuring mechanical stability.
- Manufacturing facility certified to ISO9001 Quality Management System standards.
- Module packaging optimized to protect product during transportation and minimize on-site waste.

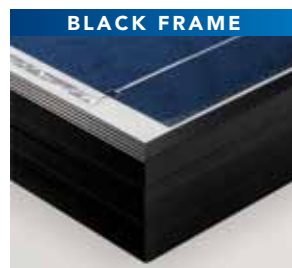
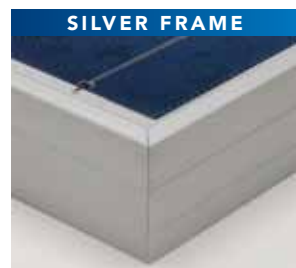
WARRANTIES

- Leading limited power warranty* ensures 91.2% of rated power for 10 years, and 80.7% of rated power for 25 years.
- 10-year limited product warranty.

*In compliance with our warranty terms and conditions.

QUALIFICATIONS & CERTIFICATES

UL 1703 and ULC 1703, UL Fire Safety Class C, CEC, FSEC, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, SA8000



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			YL250P-29b	YL245P-29b	YL240P-29b	YL235P-29b	YL230P-29b
Power output	P_{max}	W	250	245	240	235	230
Power output tolerances	ΔP_{max}	W	-0/+5				
Module efficiency	η_m	%	15.3	15.0	14.7	14.4	14.1
Voltage at P_{max}	V_{mpp}	V	30.4	30.2	29.5	29.5	29.5
Current at P_{max}	I_{mpp}	A	8.24	8.11	8.14	7.97	7.80
Open-circuit voltage	V_{oc}	V	38.4	37.8	37.5	37.0	37.0
Short-circuit current	I_{sc}	A	8.79	8.63	8.65	8.54	8.40

STC: 1000W/m² irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN 60904-3
Average relative efficiency reduction of 5.0% at 200W/m² according to EN 60904-1

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	181.1	177.9	174.3	170.7	167.0
Voltage at P_{max}	V_{mpp}	V	27.6	27.2	26.6	26.6	26.6
Current at P_{max}	I_{mpp}	A	6.56	6.54	6.56	6.42	6.29
Open-circuit voltage	V_{oc}	V	35.4	34.5	34.2	33.8	33.8
Short-circuit current	I_{sc}	A	7.12	6.99	7.01	6.92	6.81

NOCT: open-circuit operating cell temperature at 800W/m² irradiance, 20°C ambient temperature, 1 m/s wind speed

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	46 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.45
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.33
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.06
Temperature coefficient of V_{mpp}	β_{Vmpp}	%/°C	-0.45

OPERATING CONDITIONS

Max. system voltage	600V _{dc}
Max. series fuse rating	15A
Limiting reverse current	15A
Operating temperature range	-40 to 194°F (-40 to 90°C)
Max. static load, front (e.g., snow and wind)	113 psf (5400 Pa)
Max. static load, back (e.g., wind)	50 psf (2400 Pa)
Hailstone impact	1 in (25 mm) at 51 mph (23 m/s)

CONSTRUCTION MATERIALS

Front cover (material/type/thickness)	Low-iron glass / tempered / 3.2 mm Glass may have anti-reflective coating
Cell (quantity/material/type/dimensions/area/# of busbars)	60 / polysilicon / multicrystalline / 156 mm x 156 mm / 243.3 cm ² / 2 or 3
Encapsulant (material)	Ethylene vinyl acetate (EVA)
Frame (material/color)	Aluminum alloy / anodized silver or black
Junction box (protection degree)	≥IP65
Cable (type/length/gauge/outside diameter)	PV Wire / 43.31 in (1100 mm) / 12 AWG / 0.244 in (6.2 mm)
Plug connector (manufacturer/type/protection degree)	Amphenol / H4 / IP68

The specifications in this datasheet are not guaranteed and are subject to change without prior notice. This datasheet complies with EN 50380:2003 requirements.

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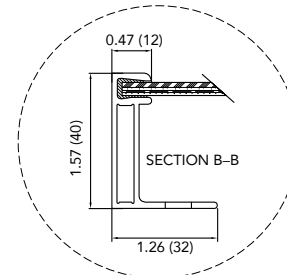
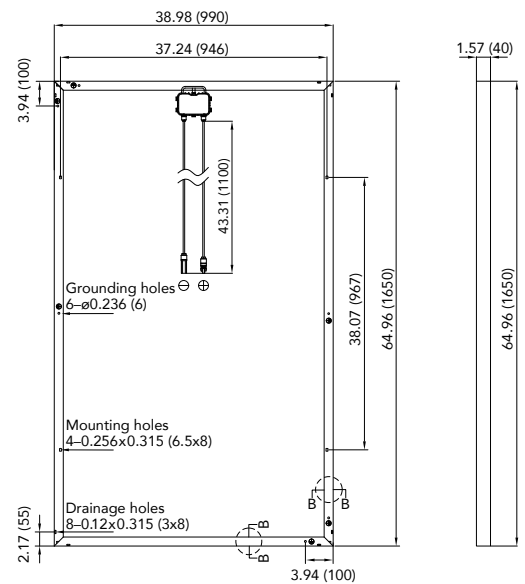
GENERAL CHARACTERISTICS

Dimensions (L/W/H)	64.96 in (1650 mm) / 38.98 in (990 mm) / 1.57 in (40 mm)
Weight	42.1 lbs (19.1 kg)

PACKAGING SPECIFICATIONS

Number of modules per pallet	26
Number of pallets per 53' container	34
Packaging box dimensions (L/W/H)	67 in (1700 mm) / 45 in (1150 mm) / 47 in (1190 mm)
Box weight	1177 lbs (534 kg)

Units: inch (mm)



Warning: Read the Installation and User Manual in its entirety before handling, installing, and operating Yingli modules.



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