

YGE-Z SERIES

YL240P-29b
YL235P-29b
YL230P-29b
YL225P-29b



INTRODUCING the Yingli Solar Z Series. Ideal for residential and commercial applications where cost savings, installation time, and aesthetics matter most.

Best Choice for INSTALLERS

- ▶ Lower equipment cost with Zep Compatible™ frame.
- ▶ Reduce labor costs on roof by 25% or more.
- ▶ Leverage a built-in grounding system – if it's mounted, it's grounded.
- ▶ Ultra-low parts count – eliminates rails, screws, mounting clips, and grounding hardware.
- ▶ Design and permit projects easily with access to layout calculator and stamped drawings.

Best Choice for HOMEOWNERS

- ▶ Cut total installed costs with savings across equipment and labor.
- ▶ Take advantage of the strongest module system yet, requiring minimal roof penetrations.
- ▶ Invest in an attractive solar array that includes a black frame, low mounting profile, and aesthetic array skirt.
- ▶ Increase energy output with flexible mounting options (portrait or landscape).
- ▶ Trust in the reliability and theft-resistance of the Zep Compatible™ system.



EXTRA! The Z Series is optimized for use with Enphase Microinverters. Enphase's Zep Compatible™ Microinverters* are designed to connect directly into the Z Series

module groove, eliminating the need for tools, fasteners or a grounding wire. With one easy step, you can simplify design, lower install time, and begin monitoring system output. *Available in Q4 2011

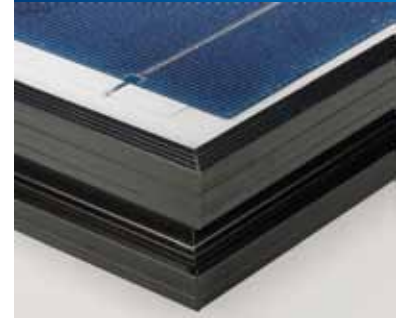
WARRANTIES

Extensive 5-year limited product warranty and a 25-year limited power warranty.

Limited power warranty* = 90% of the minimum rated power output for 10 years, 80% of the minimum rated power output for 25 years.

* In compliance with our warranty terms and conditions.

ZEP COMPATIBLE FRAME



QUALIFICATIONS & CERTIFICATES

UL 1703 and ULC 1703 (pending), CEC, FSEC, ISO 9001:2008, ISO 14001:2004, BS OSHAS 18001:2007, SA8000



YGE-Z SERIES

ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)¹

| Module name | | | YGE-Z 240 | YGE-Z 235 | YGE-Z 230 | YGE-Z 225 |
|--------------------------------------|-------------------|---|------------|------------|------------|------------|
| Module type | | | YL240P-29b | YL235P-29b | YL230P-29b | YL225P-29b |
| Power output | P _{max} | W | 240 | 235 | 230 | 225 |
| Power output tolerances ² | ΔP _{max} | % | +/- 3 | | | |
| Module efficiency | η _m | % | 14.7 | 14.4 | 14.1 | 13.8 |
| Voltage at P _{max} | V _{mpp} | V | 29.5 | 29.5 | 29.5 | 29.5 |
| Current at P _{max} | I _{mpp} | A | 8.14 | 7.97 | 7.80 | 7.63 |
| Open-circuit voltage | V _{oc} | V | 37.5 | 37.0 | 37.0 | 36.5 |
| Short-circuit current | I _{sc} | A | 8.65 | 8.54 | 8.40 | 8.28 |

¹ STC: 1000W/m² irradiance, 25°C module temperature, AM1.5g spectrum according to EN 60904-3

² Premium power output tolerance options are available upon request

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

| Power output | P _{max} | W | 174.3 | 170.7 | 167.0 | 163.4 |
|-----------------------------|------------------|---|-------|-------|-------|-------|
| Voltage at P _{max} | V _{mpp} | V | 26.6 | 26.6 | 26.6 | 26.6 |
| Current at P _{max} | I _{mpp} | A | 6.56 | 6.42 | 6.29 | 6.15 |
| Open-circuit voltage | V _{oc} | V | 34.2 | 33.8 | 33.8 | 33.3 |
| Short-circuit current | I _{sc} | A | 7.01 | 6.92 | 6.81 | 6.71 |

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 | -0.37 | | | |
| Temperature coefficient of I _{sc} | α _{Isc} | %/°C | 0.06 | | | |

OPERATING CONDITIONS

| | | |
|---|---------------------------------|--|
| Max. system voltage | 600V _{oc} | |
| Max. series fuse rating | 15A | |
| Operating temperature range | -40 to 194°F (-40 to 90°C) | |
| Max. static load, front (e.g., snow and wind) | 50 psf (2400 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 |
| Cell (quantity/material/type/dimensions/area) | 60 / polysilicon / multicrystalline / 156 mm x 156 mm / 243.3 cm ² |
| Encapsulant (material) | Ethylene vinyl acetate (EVA) |
| Frame (material/color) | Anodized aluminum alloy / black |
| Junction box (protection degree) | IP65 |
| Cable (type/length/gauge/outside diameter) | PV Wire / 47.24 in (1200 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.

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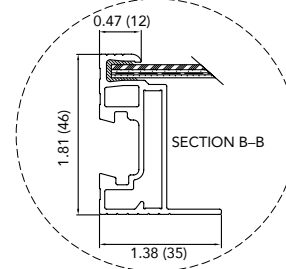
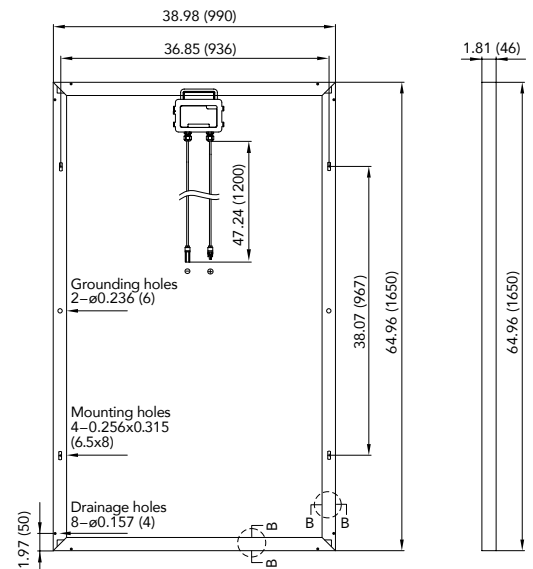
GENERAL CHARACTERISTICS

| | |
|--------------------|--|
| Dimensions (L/W/H) | 64.96 in (1650 mm) / 38.98 in (990 mm) / 1.81 in (46 mm) |
| Weight | 45.4 lbs (20.6 kg) |

PACKAGING SPECIFICATIONS

| | |
|-------------------------------------|---|
| Number of modules per pallet | 22 |
| Number of pallets per 53' container | 36 |
| Packaging box dimensions (L/W/H) | 67 in (1710 mm) / 45 in (1150 mm) / 47 in (1190 mm) |
| Box weight | 1081 lbs (490 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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