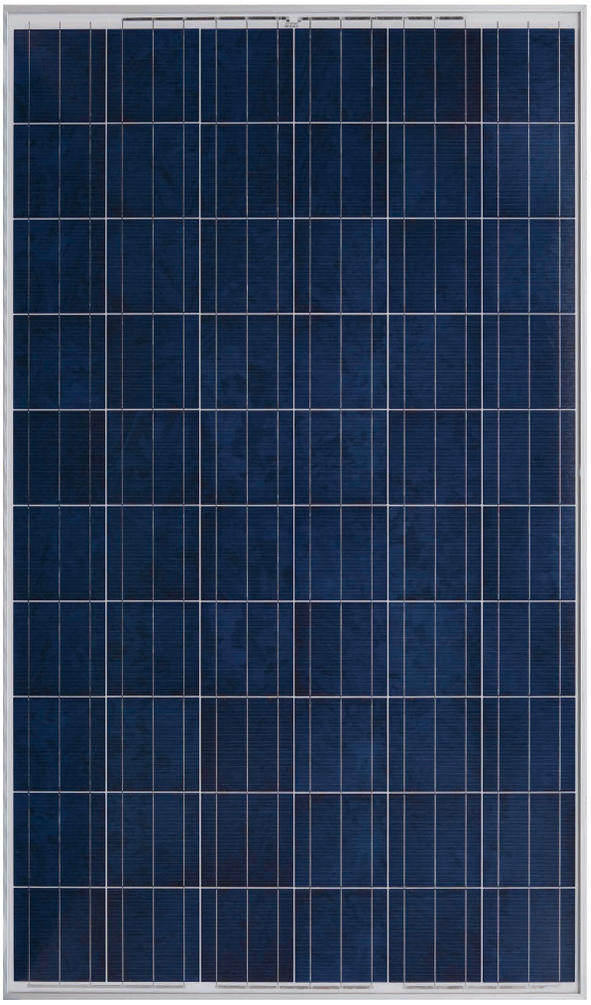
# YGE 60 Cell 40mm SERIES

Powered by YINGLI

YL260P-29b
YL255P-29b
YL250P-29b
YL245P-29b
YL240P-29b

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## ABOUT YINGLI GREEN ENERGY

Yingli Green Energy Holding Company Limited (NYSE: YGE) is one of the world's largest fully vertically integrated PV manufacturers, which markets its products under the brand "Yingli Solar". With over 7.0GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance. We are the first renewable energy company and the first Chinese company to sponsor the FIFA World Cup™.

## PERFORMANCE

- High efficiency, multicrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 15.9%, minimizing installation costs and maximizing the kWh output of your system per unit area.
- Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.
- Top ranking in the "TÜV Rheinland Energy Yield Test" and the "PHOTON Test" demonstrates high performance and annual energy production.

## RELIABILITY

- Tests by independent laboratories prove that Yingli Solar modules:
  - ✓ Fully conform to certification and regulatory standards.
  - ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
  - ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.
- Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007.



## WARRANTIES

- 10-year limited product warranty[1].
- Limited power warranty[1]: 10 years at 91.2% of the minimal rated power output, 25 years at 80.7% of the minimal rated power output.

[1]In compliance with our Warranty Terms and Conditions.

## QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, MCS, CE, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, PV Cycle, SA 8000

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# YGE 60 Cell 40mm SERIES

## ELECTRICAL PERFORMANCE

| Electrical parameters at Standard Test Conditions (STC) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Module type | | | YLxxxP-29b (xxx=$P_{max}$) | | | | |
| Power output | $P_{max}$ | W | 260 | 255 | 250 | 245 | 240 |
| Power output tolerances | $\Delta P_{max}$ | W | 0 / + 5 | | | | |
| Module efficiency | $\eta_m$ | % | 15.9 | 15.6 | 15.3 | 15.0 | 14.7 |
| Voltage at $P_{max}$ | $V_{mpp}$ | V | 30.3 | 30.0 | 29.8 | 29.6 | 29.3 |
| Current at $P_{max}$ | $I_{mpp}$ | A | 8.59 | 8.49 | 8.39 | 8.28 | 8.18 |
| Open-circuit voltage | $V_{oc}$ | V | 37.7 | 37.7 | 37.6 | 37.5 | 37.5 |
| Short-circuit current | $I_{sc}$ | A | 9.09 | 9.01 | 8.92 | 8.83 | 8.75 |

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.
Average relative efficiency reduction of 3.3% at 200W/m² according to EN 60904-1.

| Electrical parameters at Nominal Operating Cell Temperature (NOCT) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Power output | $P_{max}$ | W | 189.7 | 186.0 | 182.4 | 178.7 | 175.1 |
| Voltage at $P_{max}$ | $V_{mpp}$ | V | 27.6 | 27.4 | 27.2 | 27.0 | 26.8 |
| Current at $P_{max}$ | $I_{mpp}$ | A | 6.87 | 6.79 | 6.71 | 6.62 | 6.54 |
| Open-circuit voltage | $V_{oc}$ | V | 34.8 | 34.8 | 34.7 | 34.6 | 34.6 |
| Short-circuit current | $I_{sc}$ | A | 7.35 | 7.28 | 7.21 | 7.14 | 7.07 |

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

## THERMAL CHARACTERISTICS

| | | | |
|---|---|---|---|
| Nominal operating cell temperature | NOCT | °C | 46 +/- 2 |
| Temperature coefficient of $P_{max}$ | γ | %/°C | -0.42 |
| Temperature coefficient of $V_{oc}$ | $\beta_{Voc}$ | %/°C | -0.32 |
| Temperature coefficient of $I_{sc}$ | $\alpha_{Isc}$ | %/°C | 0.05 |
| Temperature coefficient of $V_{mpp}$ | $\beta_{Vmpp}$ | %/°C | -0.42 |

## OPERATING CONDITIONS

| | |
|---|---|
| Max. system voltage | 1000$V_{DC}$ |
| Max. series fuse rating | 15A |
| Limiting reverse current | 15A |
| Operating temperature range | -40°C to 85°C |
| Max. static load, front (e.g., snow) | 5400Pa |
| Max. static load, back (e.g., wind) | 2400Pa |
| Max. hailstone impact (diameter / velocity) | 25mm / 23m/s |

## CONSTRUCTION MATERIALS

| | |
|---|---|
| Front cover (material / thickness) | low-iron tempered glass / 3.2mm |
| Cell (quantity / material / dimensions / number of busbars) | 60 / multicrystalline silicon / 156mm x 156mm / 2 or 3 |
| Encapsulant (material) | ethylene vinyl acetate (EVA) |
| Frame (material / color / anodization color / edge sealing) | anodized aluminum alloy / silver / clear / silicone or tape |
| Junction box (protection degree) | ≥ IP65 |
| Cable (length / cross-sectional area) | 1100mm / 4mm² |
| Plug connector (type / protection degree) | MC4 / IP67 or YT08-1 / IP67 or Amphenol H4 / IP68 |

- Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly and are not guaranteed.
- The data do not refer to a single module and they are not part of the offer, they only serve for comparison to different module types.

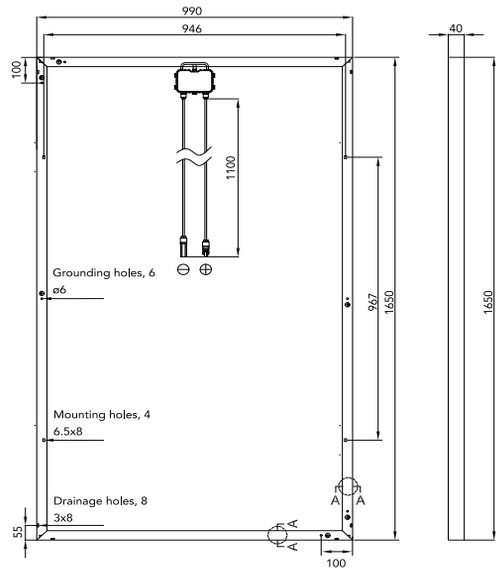
## GENERAL CHARACTERISTICS

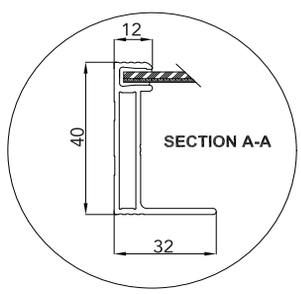
| | |
|---|---|
| Dimensions (L / W / H) | 1650mm / 990mm / 40mm |
| Weight | 18.5kg |

## PACKAGING SPECIFICATIONS

| | |
|---|---|
| Number of modules per pallet | 26 |
| Number of pallets per 40' container | 28 |
| Packaging box dimensions (L / W / H) | 1710mm / 1160mm / 1178mm |
| Box weight | 514kg |

**Unit: mm**




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

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