

YL145P-17b YL140P-17b YL135P-17b YL130P-17b YL125P-17b





#### **ABOUT YINGLI GREEN ENERGY**

Yingli Green Energy Holding Company Limited (NYSE: YGE) is one of the world's largest fully vertically integrated PV manufacturers. With over 4.5 GW 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  $\text{Cup}^{\text{TM}}$ .

## **PERFORMANCE**

High efficiency, polycrystalline solar cells with high transmission and textured glass delivering a module efficiency of up to 14.5%, minimizing installation costs and maximizing the kWh output of your system per unit area.

# **QUALITY AND RELIABILITY**

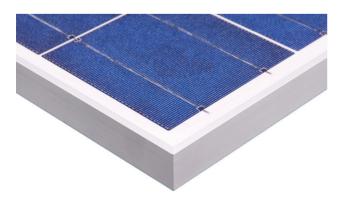
- Industry leading in-house manufacturing of polysilicon, ingots, wafers, cells and modules ensures tight control of our material and production quality.
- Robust, corrosion resistant aluminum frame independently tested to withstand wind loads of 2.4 kPa and snow loads of 2.4 kPa ensuring a stable mechanical life for your modules.
- Module packaging optimized to protect product during transportation and minimize on-site waste.
- This type of module is commonly use for the small off-grid system.

# QUALIFICATIONS AND CERTIFICATES

IEC 61215, IEC 61730, CGC, ISO 9001:2008







# YGE 145 SERIES

#### **ELECTRICAL PERFORMANCE**

| Electrical parameters at Standard Test Conditions (STC) |                   |   |                       |         |         |         |         |
|---|-------------------|---|-----------------------|---------|---------|---------|---------|
| Module name   |                   |   | YGE 145               | YGE 140 | YGE 135 | YGE 130 | YGE 125 |
| Module type   |                   |   | YLxxxP-17b (xxx=Pmax) |         |         |         |         |
| Power output  | P <sub>max</sub>  | w | 145                   | 140     | 135     | 130     | 125     |
| Power output tolerances                                 | ΔP <sub>max</sub> | % |                       |         | +/- 5   |         |         |
| Module efficiency                                       | η <sub>m</sub>    | % | 14.5                  | 14.0    | 13.5    | 13.0    | 12.5    |
| Voltage at P <sub>max</sub>                             | V <sub>mpp</sub>  | ٧ | 18.15                 | 18.01   | 17.77   | 17.51   | 17.34   |
| Current at P <sub>max</sub>                             | I <sub>mpp</sub>  | Α | 7.99                  | 7.77    | 7.60    | 7.42    | 7.21    |
| Open-circuit voltage                                    | V <sub>oc</sub>   | ٧ | 22.46                 | 22.28   | 22.00   | 21.67   | 21.46   |
| Short-circuit current                                   | l <sub>sc</sub>   | Α | 8.47                  | 8.30    | 8.12    | 8.00    | 7.74    |

STC:  $1000W/m^2$  irradiance,  $25^{\circ}C$  cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at  $200W/m^2$  according to EN 60904-1.

| Electrical parameters at Nominal Operating Cell Temperature (NOCT) |                  |   |        |        |        |        |        |
|--|------------------|---|--------|--------|--------|--------|--------|
| Power output   | P <sub>max</sub> | W | 117.46 | 113.41 | 109.36 | 105.31 | 101.26 |
| Voltage at P <sub>max</sub>  | V <sub>mpp</sub> | ٧ | 16.73  | 16.59  | 16.38  | 16.14  | 15.98  |
| Current at P <sub>max</sub>  | I <sub>mpp</sub> | Α | 6.40   | 6.26   | 6.12   | 5.96   | 5.78   |
| Open-circuit voltage   | V <sub>oc</sub>  | ٧ | 20.44  | 20.28  | 20.02  | 19.72  | 19.53  |
| Short-circuit current  | l <sub>sc</sub>  | Α | 6.78   | 6.64   | 6.50   | 6.40   | 6.19   |

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 $P_{\text{max}}$ | γ                | %/°C | -0.45    |
| Temperature coefficient of $V_{oc}$         | β <sub>voc</sub> | %/°C | -0.33    |
| Temperature coefficient of I <sub>sc</sub>  | α <sub>lsc</sub> | %/°C | 0.06     |

### **OPERATING CONDITIONS**

| Max. system voltage                           | 50V <sub>DC</sub>  |
|---|--|
| Max. series fuse rating                       | 15A  |
| Limiting reverse current                      | Do not apply external voltages larger than Voc of the module |
| Operating temperature range                   | -40 to 85°C  |
| Max. static load, front (e.g., snow and wind) | 2400Pa   |
| 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 )     | 36 / multicrystalline silicon / 156mm x 156mm |  |  |
| Encapsulant (material)                       | ethylene vinyl acetate (EVA)                  |  |  |
| Frame (material / color / anodization color) | anodized aluminum alloy / silver / clear      |  |  |

- 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

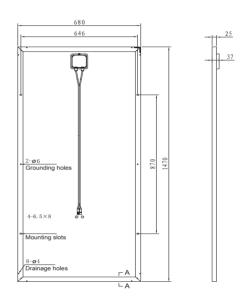
#### **GENERAL CHARACTERISTICS**

| Dimensions (L / W / H) | 1470mm / 680mm / 25mm |  |  |
|------------------------|-----------------------|--|--|
| Weight                 | 10.81kg               |  |  |

#### **PACKAGING SPECIFICATIONS**

| Number of modules per box               | 2                    |
|---|----------------------|
| Packaging box dimensions<br>(L / W / H) | 1500mm /710mm / 80mm |

#### Unit: mm







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



Yingli Green Energy Holding Co. Ltd. service@yinglisolar.com Tel: 0086-312-8929802

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