

YLM 3.0 PLUS

645-670 W

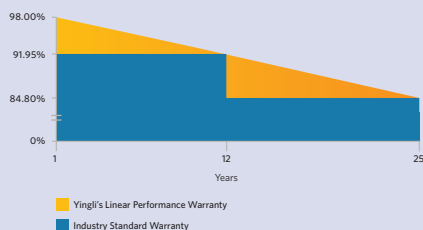


132 CELL
CELL QUANTITY

0-5 W
POWER TOLERANCE

12 YEAR
PRODUCT WARRANTY

25 YEAR
POWER WARRANTY



IMPROVED POWER

NEVER SETTLE FOR LESS

YLM 3.0 modules use high efficiency p-type monocrystalline PERC cell technology. With high quality encapsulation materials and classic glass-backsheet structure, YLM 3.0 modules are perfectly suited to the harsh environment and provide you with high reliability and quality assurance.



Classic Structure

The glass-backsheet structure and layout design have been proven in the market for a long time.



Superior Yield

The large size cell enhances the module's power output, while the excellent temperature coefficient and comprehensive LID/LeTID degradation suppression technology allow the module to generate more energy yield once in use.



Excellent Durability

The modules meet IEC standard testing requirements and are resistant to salt mist, ammonia, dust and sand, snail trail and PID risks.



Wide Applications

The glass-backsheet structure, special material selection and extra-strong frames effectively enhance the mechanical performance of the modules, their compatibility with mainstream trackers and inverters, and their adaptability to harsh environments.



Lower Losses

The multi-busbar design effectively reduces the impact of micro-cracks and broken busbars, and the half-cell structure effectively reduces the impact of shadow shading.

QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE



Yingli Solar

Headquartered in Baoding, China, Yingli Energy Development Company Limited, known as Yingli Solar, is a leading solar solution provider. Yingli Solar is committed to providing clean, renewable energy through PV power generation technology for factories, homes and utilities around the world. Yingli Solar provides reliable products and services through continuous technological advancement and management innovation.

Electrical parameters at Standard Test Conditions (STC)*

| Module type | | | YLxxxD-45f 1/2 (xxx=Pmax) | | | | | |
|-------------------------|------------------|---|---------------------------------|-------|-------|-------|-------|-------|
| | | | YLxxxD-45f 1500V 1/2 (xxx=Pmax) | | | | | |
| Power output | P_{max} | W | 645 | 650 | 655 | 660 | 665 | 670 |
| Power output tolerances | ΔP_{max} | W | 0 / + 5 | | | | | |
| Module efficiency | η_m | % | 20.76 | 20.92 | 21.09 | 21.25 | 21.41 | 21.57 |
| Voltage at P_{max} | V_{mpp} | V | 37.50 | 37.70 | 37.90 | 38.10 | 38.30 | 38.50 |
| Current at P_{max} | I_{mpp} | A | 17.20 | 17.24 | 17.29 | 17.33 | 17.37 | 17.41 |
| Open-circuit voltage | V_{oc} | V | 45.10 | 45.30 | 45.50 | 45.70 | 45.90 | 46.10 |
| Short-circuit current | I_{sc} | A | 18.26 | 18.31 | 18.36 | 18.42 | 18.48 | 18.54 |

*STC: 1000 W·m⁻² irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-3.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)*

| | | | | | | | | |
|-----------------------|-----------|---|--------|--------|--------|--------|--------|--------|
| Power output | P_{max} | W | 484.42 | 488.18 | 491.93 | 495.69 | 499.44 | 503.20 |
| Voltage at P_{max} | V_{mpp} | V | 35.21 | 35.4 | 35.56 | 35.75 | 35.94 | 36.13 |
| Current at P_{max} | I_{mpp} | A | 13.76 | 13.79 | 13.83 | 13.86 | 13.9 | 13.93 |
| Open-circuit voltage | V_{oc} | V | 42.64 | 42.83 | 43.02 | 43.21 | 43.4 | 43.59 |
| Short-circuit current | I_{sc} | A | 14.71 | 14.75 | 14.79 | 14.84 | 14.89 | 14.94 |

*NOCT: open-circuit module operation temperature at 800 W·m⁻² irradiance, 20°C ambient temperature, 1 m·s⁻¹ wind speed.

THERMAL CHARACTERISTICS

| | | | |
|--------------------------------------|----------|------|--------|
| Nominal operating cell temperature | NOCT | °C | 43 ± 2 |
| Temperature coefficient of P_{max} | γ | %/°C | -0.34 |
| Temperature coefficient of V_{oc} | β | %/°C | -0.25 |
| Temperature coefficient of I_{sc} | α | %/°C | 0.04 |

OPERATING CONDITIONS

| | |
|---|-------------------------------|
| Max. system voltage | 1000 V_{oc} / 1500 V_{oc} |
| Max. series fuse rating* | 30 A |
| Operating temperature range | -40°C to 85°C |
| Max. static load, front (e.g., snow) | 5400 Pa |
| Max. static load, back (e.g., wind) | 2400 Pa |
| Max. hailstone impact (diameter / velocity) | 25 mm / 23 m·s ⁻¹ |

*DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection.

CONSTRUCTION MATERIALS

| | |
|---|---|
| Cell (material / quantity) | p-type monocrystalline silicon / 6 x 22 |
| Glass (material / thickness) | low-iron tempered glass / 3.2 mm |
| Frame (material) | anodized aluminum alloy |
| Junction box (type / protection degree) | 3 bypass diodes / ≥ IP67 |
| Cable (length / cross-sectional area) | ± 300 mm or customized length / 4 mm ² |

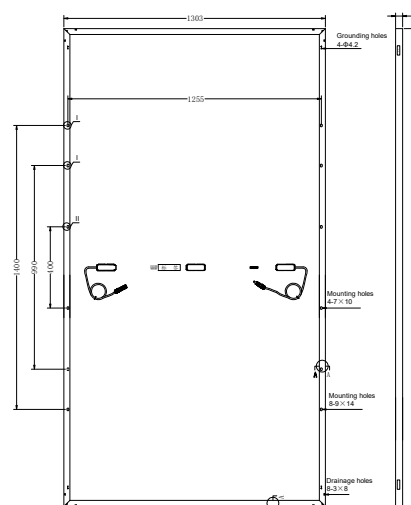
GENERAL CHARACTERISTICS

| | |
|------------------------|---------------------------|
| Dimensions (L / W / H) | 2384 mm / 1303 mm / 35 mm |
| Weight | 34 kg |

PACKAGING SPECIFICATIONS

| | |
|--------------------------------------|-----------------------------|
| Number of modules per pallet | 31 |
| Number of pallets per 40' container | 17 |
| Packaging box dimensions (L / W / H) | 1340 mm / 1140 mm / 2500 mm |
| Box weight | 1107 kg |

Unit: mm



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

- 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.

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