YLM 3.0 PLUS
580-605 W

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.

QUALIFICATIONS & CERTIFICATES

Yingli Solar

YINGLI SOLAR

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.

120 CELL
CELL QUANTITY

0–5 W
POWER TOLERANCE

12 YEAR
PRODUCT WARRANTY

25 YEAR
POWER WARRANTY

YINGLISOLAR.COM
**YLM 3.0 PLUS**

### ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC)

<table>
<thead>
<tr>
<th>Module type</th>
<th>YLxxxD-41f 1/2 (xxx=Pmax)</th>
<th>YLxxxD-41f 1500V 1/2 (xxx=Pmax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power output P_{max} W</td>
<td>580</td>
<td>585</td>
</tr>
<tr>
<td>Power output tolerances ΔP_{max} W</td>
<td>0 / + 5</td>
<td></td>
</tr>
<tr>
<td>Module efficiency η m %</td>
<td>20.49</td>
<td>20.67</td>
</tr>
<tr>
<td>Voltage at P_{max} V_{mpp} V</td>
<td>33.80</td>
<td>34.00</td>
</tr>
<tr>
<td>Current at P_{max} I_{mpp} A</td>
<td>17.16</td>
<td>17.21</td>
</tr>
<tr>
<td>Open-circuit voltage V_{oc} V</td>
<td>40.80</td>
<td>41.00</td>
</tr>
<tr>
<td>Short-circuit current I_{sc} A</td>
<td>18.21</td>
<td>18.26</td>
</tr>
</tbody>
</table>

*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)

<table>
<thead>
<tr>
<th>Module type</th>
<th>YLxxxD-41f 1/2 (xxx=Pmax)</th>
<th>YLxxxD-41f 1500V 1/2 (xxx=Pmax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power output P_{max} W</td>
<td>435.60</td>
<td>439.36</td>
</tr>
<tr>
<td>Voltage at P_{max} V_{mpp} V</td>
<td>31.73</td>
<td>31.91</td>
</tr>
<tr>
<td>Current at P_{max} I_{mpp} A</td>
<td>13.73</td>
<td>13.77</td>
</tr>
<tr>
<td>Open-circuit voltage V_{oc} V</td>
<td>37.92</td>
<td>38.11</td>
</tr>
<tr>
<td>Short-circuit current I_{sc} A</td>
<td>14.67</td>
<td>14.71</td>
</tr>
</tbody>
</table>

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

### GENERAL CHARACTERISTICS

- **Dimensions (L / W / H):** 2172 mm / 1303 mm / 35 mm
- **Weight:** 31 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 / 2290 mm
- **Box weight:** 1013 kg

### 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_{dc} / 1500 V_{dc}
- **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 20
- **Glass (material / thickness):** low-iron tempered glass / 3.2 mm
- **Frame (material):** anodized aluminum alloy
- **Junction box (type / protection degree):** 3 bypass diodes / IP68
- **Cable (length / cross-sectional area):** ± 300 mm or customized length / 4 mm²

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*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.*

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

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