PANDA BIFACIAL modules generate power from the front as well as from the back side. Together with the cutting-edge PANDA N-type crystalline silicon solar cells, which wake up earlier than conventional P-type and go to sleep later, the energy yield can be increased by 10-30%*.

**Bifacial Power**
In contrast to conventional modules, PANDA BIFACIAL modules generate energy from both sides. As the backside makes use of the reflected and scattered light from the surroundings, the modules can yield up to 30% power more, depending on the albedo.

**High Yield**
Once used, PANDA BIFACIAL modules generate more energy, because of low LID, good low-light performance and temperature coefficient of N-type monocrystalline silicon solar cells.

**High Power Output**
5 Bus-bar half cells and series & parallel electrical structure can reduce CTM loss and increase module output power.

**Durability**
Durable PANDA BIFACIAL modules work well in muggy conditions, and independently tested for harsh environmental conditions beyond IEC standards such as exposure to salt mist, ammonia or known PID risk factors.

**Optimal Self-cleaning**
Optimal self-cleaning due to frameless module design.

Yingli Green Energy
Yingli Green Energy Holding Company Limited, known as “Yingli Solar”, is one of the world’s leading solar panel manufacturers with the mission to provide affordable green energy for all. Deploying more than 17 GW solar panels worldwide, Yingli Solar makes solar power possible for communities everywhere by using our global manufacturing and logistics expertise to address unique local challenges.

*Depending on the environmental condition of installation.
PANDA BIFACIAL 144HCL

GENERAL CHARACTERISTICS

Dimensions (L / W / H) 1950mm / 1040mm / 6mm
Weight 27.9kg

PACKAGING SPECIFICATIONS

Number of modules per pallet 33
Number of pallets per 40’ container 24
Packaging pallets dimensions (L / W / H) 2070mm / 1140mm / 1230mm
Pallet weight 980kg

Electrical parameters at Standard Test Conditions (STC)

<table>
<thead>
<tr>
<th>Power output Pmax W</th>
<th>360</th>
<th>355</th>
<th>350</th>
<th>345</th>
<th>340</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power output tolerance</td>
<td>DPmax W</td>
<td>0 / + 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module efficiency nmax %</td>
<td>17.8</td>
<td>17.5</td>
<td>17.3</td>
<td>17.0</td>
<td>16.8</td>
</tr>
<tr>
<td>Voltage at Pmax Vmp V</td>
<td>39.8</td>
<td>39.5</td>
<td>39.2</td>
<td>38.7</td>
<td>38.5</td>
</tr>
<tr>
<td>Current at Pmax Impp A</td>
<td>9.05</td>
<td>8.99</td>
<td>8.94</td>
<td>8.92</td>
<td>8.85</td>
</tr>
<tr>
<td>Open-circuit voltage Voc V</td>
<td>47.2</td>
<td>47.1</td>
<td>46.6</td>
<td>46.3</td>
<td>46.0</td>
</tr>
</tbody>
</table>

Electrical parameters at Nominal Module Operating Temperature (NMOT)

<table>
<thead>
<tr>
<th>Power output Pmax W</th>
<th>272.7</th>
<th>268.9</th>
<th>265.1</th>
<th>261.3</th>
<th>257.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage at Pmax Vmp V</td>
<td>37.8</td>
<td>37.5</td>
<td>37.2</td>
<td>36.8</td>
<td>36.5</td>
</tr>
<tr>
<td>Current at Pmax Impp A</td>
<td>7.21</td>
<td>7.16</td>
<td>7.12</td>
<td>7.11</td>
<td>7.05</td>
</tr>
<tr>
<td>Open-circuit voltage Voc V</td>
<td>44.8</td>
<td>44.7</td>
<td>44.2</td>
<td>43.9</td>
<td>43.6</td>
</tr>
<tr>
<td>Short-circuit current Isc A</td>
<td>7.62</td>
<td>7.59</td>
<td>7.55</td>
<td>7.54</td>
<td>7.52</td>
</tr>
</tbody>
</table>

THERMAL CHARACTERISTICS

| Nominal module operating temperature NMOT °C | 39±2 |
| Temperature coefficient (Pmax) γPmax %/°C | -0.38 |
| Bifaciality (Pmax) φPmax % | 82.0 |
| Temperature coefficient (Voc) βVoc %/°C | -0.30 |
| Bifaciality (Voc) φVoc % | 99.3 |
| Temperature coefficient (Isc) αIsc %/°C | 0.04 |
| Bifaciality (Isc) φIsc % | 81.5 |

OPERATING CONDITIONS

Max. system voltage 1500Vdc
Max. series fuse rating 20A
Limiting reverse current 20A
Operating temperature range -40°C to 85°C
Max. snow load, front* 5400Pa
Max. wind load, back 2400Pa
Max. hailstone impact (diameter / velocity) 25mm / 23m/s
Fire class A

*Load bearing capacity depends on installation

CONSTRUCTION MATERIALS

Front and back cover (material / thickness) low-iron semi-tempered glass / 2.5mm x 2
Cell (quantity / material / dimensions / number of busbar) 144 / monocrystalline silicon / 156.75mm x 78.38mm / 5
Frame N / A
Junction box (protection degree) w / IP67
Cable (length / cross-sectional area) 350mm / 4mm²
Plug connector (type / protection degree) RH05-8 / IP67

QUALIFICATIONS & CERTIFICATES


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

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