AE BIFACIAL DOUBLE GLASS MONOCRYSTALLINE PV MODULES
AE MD-144 Series 530W-545W

144 CELLS

1. TEMPERATURE
   Hot spot temperature lower than 85°C
   The IEC61215 test shows that with a zero percentage, a small and a 100 percentage of shaded area, respectively hot spots will not exceed 85°C, which is the maximum operating condition.

2. SAFETY
   Instantly reduced temperature, thus eliminating material hazard and ensuring more safety of the module, preventing fire risks caused by hot spots.

3. GERMAN QUALITY
   AE Solar photovoltaic modules are produced using high quality materials, automated robotic lines, German technology and standards.

4. PERFORMANCE GUARANTEE
   AE Solar assures high investment, security and warranty claims by providing linear performance guarantee of 30 years and 12 years of product warranty.

5. RELIABILITY
   Bypass diodes prevent cells mismatching at shaded areas. The lower temperature of hot-spot free modules will eliminate potential cause for back sheet degradation, hence enhancing reliability for longer term.

6. HIGH RETURNS
   This new technology prevents instant falls in the module output, thus increasing the performance ratio up to 30% and return for all types of installations.

7. PLUS-SORTING
   Higher yield due to plus-sorting from 0 up to +5 Wp guarantees the high system efficiency and yield stability.

8. CERTIFICATES
   Lining with international standards, AE Solar Photovoltaic modules are tested and certified under extreme stress conditions and it can bear harsh environment influences.

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**OUR PERFORMANCE GUARANTEE**

- **AE Solar**
- **Commercial Guarantee**

<table>
<thead>
<tr>
<th>Year</th>
<th>AE Solar</th>
<th>Commercial Guarantee</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>97%</td>
<td>97%</td>
</tr>
<tr>
<td>5</td>
<td>90%</td>
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<td>10</td>
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<tr>
<td>15</td>
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<td>20</td>
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<td>30</td>
<td>97%</td>
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</tbody>
</table>

**30 years Performance Guarantee**

**12 years Product Warranty**
## TECHNICAL DATA

**AE BIFACIAL DOUBLE GLASS Series 530W-545W**

### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>AE 530MD-144</th>
<th>AE 535MD-144</th>
<th>AE 540MD-144</th>
<th>AE 545MD-144</th>
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</thead>
<tbody>
<tr>
<td>Nominal Max. Power Pmax (Wp)</td>
<td>530</td>
<td>535</td>
<td>540</td>
<td>545</td>
</tr>
<tr>
<td>Maximum power voltage Vmp(V)</td>
<td>41.70</td>
<td>41.93</td>
<td>42.15</td>
<td>42.38</td>
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<tr>
<td>Maximum power current Imp (A)</td>
<td>12.71</td>
<td>12.76</td>
<td>12.81</td>
<td>12.86</td>
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<tr>
<td>Open-circuit voltage Voc(V)</td>
<td>49.65</td>
<td>49.78</td>
<td>49.90</td>
<td>50.01</td>
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<tr>
<td>Short-circuit current Isc (A)</td>
<td>13.47</td>
<td>13.52</td>
<td>13.57</td>
<td>13.62</td>
</tr>
<tr>
<td>Module efficiency (%)</td>
<td>20.50</td>
<td>20.70</td>
<td>20.90</td>
<td>21.10</td>
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<tr>
<td>Operating temperature (°C)</td>
<td>-40 to +85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum system voltage DC V (IEC)</td>
<td>1500</td>
<td></td>
<td></td>
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<tr>
<td>Maximum series fuse rating (A)</td>
<td>25</td>
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<tr>
<td>Power tolerance (%)</td>
<td>0 ~ +4.99</td>
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<tr>
<td>Temp. coefficients of Pmax (%)/°C</td>
<td>-0.350</td>
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<td></td>
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</tr>
<tr>
<td>Temp. coefficients of Voc (%)/°C</td>
<td>-0.275</td>
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<tr>
<td>Nom. Operating cell temp. (NOCT) (°C)</td>
<td>45±2</td>
<td></td>
<td></td>
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</table>

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m² with spectrum AM 1.5 and a cell temperature of 25°C.

### MATERIAL CHARACTERISTICS

- **Cell type**: Mono-crystalline 182 X 91 mm
- **No. of cells**: 144 Cells (72 Full Cells)
- **Dimensions**: 2278 X 1133 X 35 mm
- **Weight**: 34 KG
- **Junction box**: IP 68 rated (3 bypass diodes)
- **Output cable**: 1 x 4.0mm², 350 mm length or customised
- **Connector type**: MC4 / MC4 compatible
- **Hall resistance**: Max. Ø 25 mm, at 23 m/s
- **Wind load**: 2400 Pa / 244 kg/m²
- **Mechanical load**: 5400 Pa / 550 kg/m²

### PACKAGING INFORMATION

- **Packing configuration**: 60 pcs / double pallet
- **Loading Capacity**: 600 pcs / 40HQ
- **Size / pallet (mm)**: 2300x1135x2490 mm
- **Weight**: 2170kg /double pallet

### DIMENSIONS

![Diagram of solar panel dimensions](image)

**Section A-A**
- Mounting hole
- Drainage hole

**Side**
- 1088
- 2464

**Back Side**
- 1134
- 2483

**Front**
- 1134
- 2483

**Section A-A**
- 35

**CERTIFICATES**

- TÜV Rheinland®
- IEC 81215
- IEC 61730
- PERIODICAL INSPECTION
- PID RESISTANT
- SALTMIST RESISTANT
- SAND RESISTANT
- CORROSIVE GAS (NH3)
- CE
- CHUBB

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