**AE BIFACIAL DOUBLE GLASS MONOCRYSTALLINE PV MODULES**

**AE MC-144 Series 430W-445W**

tested by [Fraunhofer CSP](https://www.fraunhofer.de)

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**144 CELLS**

- **PID RESISTANT**
- **SALT CORROSION RESISTANT**
- **SAND RESISTANT**
- **AMMONIA RESISTANT**
- **HIGHLY STABLE AND TOUGH**

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**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.

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**SAFETY**

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

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**GERMAN QUALITY**

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

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**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.

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**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.

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**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.

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**PLUS-SORTING**

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

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**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**

- 30 years Performance Guarantee
- 12 years Product Warranty

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![Graph showing the performance guarantee over 30 years](image)

**Deutsche Qualität Garantiert**

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[AE Solar](https://www.aesolar.com) — Inspiring green-energy since 2003
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>AE430MC-144</th>
<th>AE435MC-144</th>
<th>AE440MC-144</th>
<th>AE445MC-144</th>
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</thead>
<tbody>
<tr>
<td>Nominal Max. Power</td>
<td>430</td>
<td>435</td>
<td>440</td>
<td>445</td>
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<tr>
<td>Pmax (Wp)</td>
<td></td>
<td></td>
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<tr>
<td>Maximum power voltage</td>
<td>40.6</td>
<td>40.8</td>
<td>41.0</td>
<td>41.2</td>
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<tr>
<td>Vmp(V)</td>
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<tr>
<td>Maximum power current</td>
<td>10.60</td>
<td>10.67</td>
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<td>10.80</td>
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<tr>
<td>Imp (A)</td>
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<tr>
<td>Open-circuit voltage</td>
<td>49.2</td>
<td>49.4</td>
<td>49.6</td>
<td>49.8</td>
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<tr>
<td>Voc(V)</td>
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<tr>
<td>Short-circuit current</td>
<td>11.19</td>
<td>11.26</td>
<td>11.33</td>
<td>11.46</td>
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<tr>
<td>Isc (A)</td>
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<tr>
<td>Module efficiency (%)</td>
<td>19.80</td>
<td>20.00</td>
<td>20.20</td>
<td>20.50</td>
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<tr>
<td>Operating temperature(°C)</td>
<td>-40 to +85</td>
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<td>Maximum system voltage DC V (IEC)</td>
<td>1500</td>
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<td>Maximum series fuse rating (A)</td>
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<tr>
<td>Power tolerance (%)</td>
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<td>-4.99</td>
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<tr>
<td>Temp. coefficients of Pmax (%/°C)</td>
<td>-0.370</td>
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<td>Temp. coefficients of Voc (%/°C)</td>
<td>-0.286</td>
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<td>Temp. coefficients of Isc (%/°C)</td>
<td>0.057</td>
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<td>Nom. Operating cell temp.(NOCT) (°C)</td>
<td>45±2</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 166*83 mm
- **No. of cells**: 144 Cells (72 Full Cells)
- **Dimensions**: 2094 x 1038 x 35 mm
- **Weight**: 28 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
- **Hail resistance**: Max. Ø 25 mm, at 23 m/s
- **Wind load**: 2400 Pa / 244 kg/m²
- **Mechanical load**: 3400 Pa / 550 kg/m²

**PACKAGING INFORMATION**

- **Packing configuration**: 62 pcs / double pallet
- **Loading Capacity**: 682 pcs / 40HQ
- **Size / pallet (mm)**: 2125x1135x2415 mm
- **Weight**: 2200 kg / double pallet

**DIMENSIONS**

**CERTIFICATES**

[Certificates logos]

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**AE SOLAR**

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