420W MBB Half-Cell Module
JAM72S10 400-420/MR/1000V Series

Introduction
Assembled with multi-busbar PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.

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**Higher output power**
**Less shading and lower resistive loss**
**Better mechanical loading tolerance**
**Lower LCOE**

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**Superior Warranty**
- 12-year product warranty
- 25-year linear power output warranty

**Comprehensive Certificates**
- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems

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JA Linear Power Warranty  Industry Warranty
**OPERATING CONDITIONS**

- **Maximum System Voltage**: 1000V DC (IEC)
- **Operating Temperature**: -40°C ~ +65°C
- **Maximum Series Fuse**: 20A
- **Maximum Static Load, Front**: 3600Pa, 1.5
- **Maximum Static Load, Back**: 1600Pa, 1.5
- **NOCT**: 45±2°C
- **Application Class**: Class A

**CHARACTERISTICS**

- **Current-Voltage Curve**: JAM72S10-405/MR/1000V
- **Power-Voltage Curve**: JAM72S10-405/MR/1000V
- **Current-Voltage Curve**: JAM72S10-405/MR/1000V

**SPECIFICATIONS**

- **Cell**: Mono
- **Weight**: 22.7kg±3%
- **Dimensions**: 2015±2mm×996±2mm×40±1mm
- **Cable Cross Section Size**: 4mm²
- **No. of cells**: 144 (6×24)
- **Cable Length (Including Connector)**: Portrait:300mm+400mm+1200mm, Landscape:1200mm+400mm
- **Connector**: Genuine MC4
- **Country of Manufacturer**: China/Vietnam

**ELECTRICAL PARAMETERS AT STC**

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<tbody>
<tr>
<td>Rated Maximum Power (Pmax) [W]</td>
<td>400</td>
<td>405</td>
<td>410</td>
<td>415</td>
<td>420</td>
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<tr>
<td>Open Circuit Voltage (Voc) [V]</td>
<td>49.58</td>
<td>49.86</td>
<td>50.12</td>
<td>50.41</td>
<td>50.70</td>
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<tr>
<td>Maximum Power Voltage (Vmp) [V]</td>
<td>41.33</td>
<td>41.60</td>
<td>41.88</td>
<td>42.18</td>
<td>42.47</td>
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<tr>
<td>Short Circuit Current (Isc) [A]</td>
<td>10.33</td>
<td>10.39</td>
<td>10.45</td>
<td>10.51</td>
<td>10.56</td>
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<tr>
<td>Module Efficiency [%]</td>
<td>19.9</td>
<td>20.2</td>
<td>20.4</td>
<td>20.7</td>
<td>20.9</td>
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<tr>
<td>Power Tolerance</td>
<td>0~+5W</td>
<td></td>
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<tr>
<td>Temperature Coefficient of Isc (α_Isc)</td>
<td>+0.044%/°C</td>
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<tr>
<td>Temperature Coefficient of Voc (β_Voc)</td>
<td>-0.272%/°C</td>
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<tr>
<td>Temperature Coefficient of Pmax (γ_Pmp)</td>
<td>-0.350%/°C</td>
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**STC**

Irradiance 1000W/m², cell temperature 25°C, AM1.5G

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

*For NexTracker installations static loading performance: front load measures 2400Pa, while back load measures 2400Pa.

Measurement tolerance at STC: Pmax ±3 %, Voc ±2% and Isc ±4%.

**ELECTRICAL PARAMETERS AT NOCT**

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<tbody>
<tr>
<td>Rated Max Power (Pmax) [W]</td>
<td>302</td>
<td>306</td>
<td>310</td>
<td>314</td>
<td>318</td>
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<tr>
<td>Open Circuit Voltage (Voc) [V]</td>
<td>46.41</td>
<td>46.66</td>
<td>46.91</td>
<td>47.16</td>
<td>47.38</td>
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<tr>
<td>Maximum Power Voltage (Vmp) [V]</td>
<td>38.65</td>
<td>38.90</td>
<td>39.16</td>
<td>39.41</td>
<td>39.60</td>
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<tr>
<td>Short Circuit Current (Isc) [A]</td>
<td>8.25</td>
<td>8.31</td>
<td>8.36</td>
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<td>8.46</td>
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<tr>
<td>Maximum Power Current (Imp) [A]</td>
<td>7.81</td>
<td>7.87</td>
<td>7.92</td>
<td>7.97</td>
<td>8.03</td>
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<td>NOCT</td>
<td>Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s, AM1.5G</td>
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**CHARACTERISTICS**

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- **Power-Voltage Curve**: JAM72S10-405/MR/1000V
- **Current-Voltage Curve**: JAM72S10-405/MR/1000V

**MECHANICAL DIAGRAMS**

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**Voltage (V)**

- **Version No.**: Global_EN_20200531A