420-440W Residential AC Module

SunPower® Maxeon® Technology

Built specifically for use with the SunPower Equinox® system, the only fully integrated solar solution designed, engineered, and warranted by one company.

**Highest Power AC Density Available.**

The patented, solid-copper foundation Maxeon Gen 6 cell is over 5% larger than prior generations, delivering the highest efficiency AC solar panel available.*

**Part of the SunPower Equinox® Solar System**

- Compatible with mySunPower™ monitoring
- Seamless aesthetics

**Factory-integrated Microinverter**

- Highest-power integrated AC module in solar
- Engineered and calibrated by SunPower for SunPower AC modules

**Highest Lifetime Energy and Savings**

Designed to deliver 60% more energy over 25 years in real-world conditions like partial shade and high temperatures.¹

**Best Reliability, Best Warranty**

With more than 42.6 million and 15 GW modules deployed around the world, SunPower technology is proven to last. That’s why we stand behind our module and microinverter with the industry’s best 25-year Combined Power and Product Warranty.

*Datasheet*
# M-Serie: M440 | M435 | M430 | M425 | M420 SunPower® Residential AC

## AC Electrical Data

<table>
<thead>
<tr>
<th>Inverter Model: Type H (Enphase IQ7HS)</th>
<th>@240 VAC</th>
<th>@208 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Continuous Output Power (VA)</td>
<td>384</td>
<td>369</td>
</tr>
<tr>
<td>Nom. (L-L) Voltage/Range (V)</td>
<td>240 / 211–264</td>
<td>208 / 183–229</td>
</tr>
<tr>
<td>Max. Continuous Output Current (Arms)</td>
<td>1.50</td>
<td>1.77</td>
</tr>
<tr>
<td>Max. Units per 20 A (L-L) Branch Circuit</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>CEC Weighted Efficiency</td>
<td>97.0%</td>
<td>96.5%</td>
</tr>
</tbody>
</table>

## DC Power Data

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Nom. Power (Prom) W</td>
<td>440</td>
<td>435</td>
<td>430</td>
<td>425</td>
</tr>
<tr>
<td>Power Tolerance</td>
<td>+5/-0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>22.8%</td>
<td>22.5%</td>
<td>22.3%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Temp. Coef. (Power)</td>
<td>-0.29%/° C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shade Tolerance</td>
<td>Integrated module-level max. power point tracking</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tested Operating Conditions

| Operating Temp. | -40°F to +185°F (−40°C to +85°C) |
| Max. Ambient Temp. | 122°F (50°C) |
| Max. Test Load² | Wind: 125 psf, 6000 Pa, 611 kg/m² back  Snow: 187 psf, 9000 Pa, 917 kg/m² front |
| Max. Design Load | Wind: 75 psf, 3600 Pa, 367 kg/m² back  Snow: 125 psf, 6000 Pa, 611 kg/m² front |
| Impact Resistance | 1 inch (25 mm) diameter hail at 52 mph (23 m/s) |

### Mechanical Data

- Solar Cells: 66 Maxeon Gen 6
- Front Glass: High-transmission tempered glass with anti-reflective coating
- Environmental Rating: Outdoor rated
- Frame: Class 1 black anodized (highest AAMA rating)
- Weight: 48 lbs (21.8 kg)
- Recommended Max. Module Spacing: 1.3 in. (33 mm)

### Packaging Configuration

- Modules per pallet: 25
- Packaging box dimensions: 1015 * 1072 * 1220 mm
- Pallet gross weight: 590 kg
- Pallets per container: 32
- Net weight per container: 18,880 kg

#### Warranties, Certifications, and Compliance

- **Warranties**
  - 25-year limited power warranty
  - 25-year limited product warranty
- **Certifications and Compliance**
  - UL 1741 / IEEE-1547
  - UL 1741 AC Module (Type 2 fire rated)
  - UL 62109-1 / IEC 62109-2
  - FCC Part 15 Class B
  - ICES-0003 Class B
  - CAN/CSA-C22.2 NO. 107.1-01
  - CA Rule 21 (UL 1741 SA)³ (includes Volt/Var and Reactive Power Priority)
  - UL Listed PV Rapid Shutdown Equipment⁶
  - Enables installation in accordance with:
    - NEC 690.6 (AC module)
    - NEC 690.12 Rapid Shutdown (inside and outside the array)
    - NEC 690.15 AC Connectors, 690.33(A)-(E)(1)
  - When used with AC module Q Cables and accessories (UL 6703 and UL 2238)⁴:
    - Rated for load break disconnect

#### PID Test

1,000 V: IEC 2238

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* Based on datasheet review of websites of top 20 manufacturers per Wood Mackenzie US PV Leaderboard Q3 2021.
1 Maxeon 435 W, 22.5% efficient, compared to a Conventional Panel on same-sized arrays (260 W, 16% efficient, approx. 1.6 mp, 7.9% more energy per watt (based on PVSyst pan files for avg. US climate), 0.5%/yr slower degradation rate (Jordan, et. al. “Robust PV Degradation Methodology and Application.”PVSC 2018). 2 Voltage range can be extended beyond nominal if required by the utility. 3 Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area. 4 Factory set to IEEE 1547a-2014 default settings. CA Rule 21 default settings profile set during commissioning. 5 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25°C). All DC voltage is fully contained within the module. 6 UL Listed as PVRSE and conforms with NEC 2014 and NEC 2017 690.12; and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer’s instructions. 7 Please read the safety and installation instructions for more information regarding load ratings and mounting configurations.

See www.sunpower.com/company for more reference information. Specifications included in this datasheet are subject to change without notice.

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