





# 400-425 W Residential AC Module

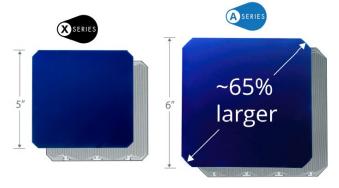
SunPower® Maxeon® Technology

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



## **Highest Power Density Available.**

SunPower's new Maxeon® Gen 5 cell is 65% larger than prior generations, delivering the most powerful cell and highest-efficiency panel in residential solar. The result is more power per square meter than any commercially available solar.







### SunPower® Maxeon® Technology

- Most powerful cell in home solar <sup>2</sup>
- Delivers unmatched reliability <sup>3</sup>
- Patented solid metal foundation prevents breakage and corrosion



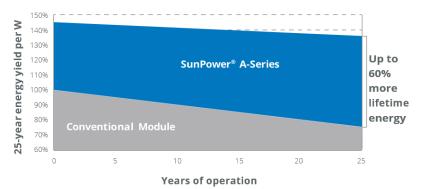
## Factory-integrated Microinverter (MI)

- Highest-power integrated AC module in solar
- 60% lighter than prior SunPower MIs
- 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.<sup>1</sup>





## **Best Reliability. Best Warranty.**

With more than 25 million 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, including the highest Power Warranty in solar.



## A-Series: A425 | A415 | A400 SunPower® Residential AC Module

| AC Electrical Data                                    |                      |  |
|---|----------------------|--|
| Inverter Model: SPWR-A4                               | @240 VAC             |  |
| Peak Output Power                                     | 366 VA               |  |
| Max. Continuous Output Power                          | 349 VA               |  |
| Nom. (L–L) Voltage/Range <sup>2</sup> (V)             | 240 / 211–264        |  |
| Max. Continuous Output Current (A)                    | 1.45                 |  |
| Max. Units per 20 A (L–L) Branch Circuit <sup>3</sup> | 11                   |  |
| CEC Weighted Efficiency                               | 97.0%                |  |
| Nom. Frequency  | 60 Hz                |  |
| Extended Frequency Range                              | 47-68 Hz             |  |
| AC Short Circuit Fault Current Over 3 Cycles          | 5.8 A rms            |  |
| Overvoltage Class AC Port                             | III                  |  |
| AC Port Backfeed Current                              | 18 mA                |  |
| Power Factor Setting                                  | 1.0                  |  |
| Power Factor (adjustable)                             | 0.7 lead. / 0.7 lag. |  |

| DC Power Data                  |                 |                    |                   |  |
|--------------------------------|-----------------|--------------------|-------------------|--|
|                                | SPR-A425-G-AC   | SPR-A415-G-AC      | SPR-A400-G-AC     |  |
| Nom. Power <sup>5</sup> (Pnom) | 425 W           | 415 W              | 400 W             |  |
| Power Tol.                     | +5/-0%          | +5/-0%             | +5/-0%            |  |
| Module Efficiency              | 22.8            | 22.3               | 21.5              |  |
| Temp. Coef. (Power)            |                 | <b>-</b> 0.29%/°C  |                   |  |
| Shade Tol.                     | Integrated modu | ule-level max. pow | er point tracking |  |

| Tested Operating Conditions |  |  |
|-----------------------------|--|--|
| Operating Temp.             | -40°F to +140°F (-40°C to +60°C)   |  |
| Max. Ambient Temp.          | 122°F (50°C)   |  |
| Max. Load                   | Wind: 62 psf, 3000 Pa, 305 kg/m² front & back<br>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 Monocrystalline Maxeon Gen 5                               |  |
| Front Glass                        | High-transmission tempered glass with anti-reflective coating |  |
| Environmental Rating               | Outdoor rated   |  |
| Frame                              | Class 1 black anodized (highest AAMA rating)                  |  |
| Weight                             | 46.5 lbs (21.1 kg)  |  |
| Recommended Max.<br>Module Spacing | 1.3 in. (33 mm)   |  |

- 1 SunPower 415 W, 22.2% efficient, compared to a Conventional Panel on same-sized arrays (260 W, 16% efficient, approx. 1.6 m²), 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 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of
- 3 #1 rank in "Fraunhofer PV Durability Initiative for Solar Modules: Part 3." PVTech Power Magazine, 2015. Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, 2013.
- 4 Factory set to 1547a-2014 default settings. CA Rule 21 default settings profile set during commissioning. See the Equinox Installation Guide #518101 for more information.
- 5 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25°C). NREL calibration standard: SOMS current, LACCS FF and voltage. All DC voltage is fully contained within the module. 6 This product is 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

See www.sunpower.com/facts for more reference information.

For more details, see extended datasheet www.sunpower.com/datasheets Specifications included in this datasheet are subject to change without notice.

©2019 SunPower Corporation. All Rights Reserved. SUNPOWER, the SUNPOWER logo and MAXEON are registered trademarks of SunPower Corporation in the U.S. and other countries as well, 1-800-SUNPOWER.

- 25-year limited power warranty
- · 25-year limited product warranty

Certifications and

Compliance

Warranties

· 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)4
- (includes Volt/Var and Reactive Power Priority)
- UL Listed PV Rapid Shutdown Equipment<sup>6</sup>

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)

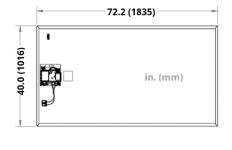
When used with InvisiMount racking and InvisiMount accessories (UL 2703):

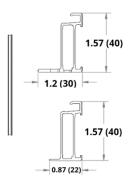
- $\cdot$  Module grounding and bonding through InvisiMount
- · Class A fire rated

When used with AC module Q Cables and accessories (UL 6703 and UL 2238)6:

· Rated for load break disconnect

PID Test Potential-induced degradation free







SUNPOWER®

Module Fire Performance: Type 2

Please read the Safety and Installation Instructions 532628 for additional details.

532618 RevA