



## SunPower® X21-350-BLK-D-AC | Residential AC Module Series

### Design-Driven Advantages

- #1 module aesthetics and efficiency<sup>1</sup>
- Unmatched module reliability<sup>2</sup>
- No electrolytic capacitors
- 25-year Complete Confidence Warranty
- California Rule 21 Phase 1 compliant

### Maximize Value for Roof

- Size system for roof, not string inverter
- Optimize performance of each module

### Expand Deployment Options

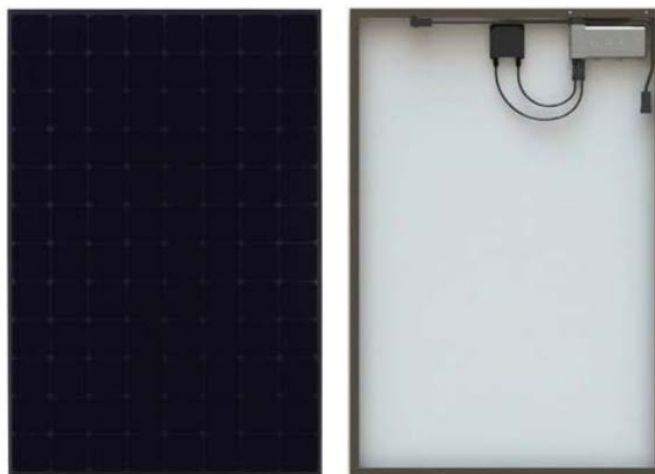
- Complex roofs and partial shading
- Small systems
- System expandability

### Simplify & Speed Installation

- Factory-integrated microinverter
- Robust, double-locking AC connectors
- Design flexibility offsite and onsite
- No DC string sizing process
- Fewer installation steps than competing systems
- Intuitive commissioning

### Component of Complete System

- Built for use with SunPower® InvisiMount™ and the SunPower Monitoring System (PVS5x)
- Superior system reliability and aesthetics



### Optimize System and Installation Efficiency

SunPower® AC modules, which include a factory-integrated SunPower microinverter, provide a revolutionary combination of high efficiency, high reliability, and module-level DC-to-AC power conversion. Designed specifically for use with SunPower InvisiMount™ and the SunPower Monitoring System, SunPower AC modules enable rapid installation, best-in-class system aesthetics, and intuitive visibility into system performance. All this comes with the best Combined Power and Product Warranty in the industry.

### Grid Support Utility-Interactive Smart Inverter

SunPower's new Type D AC module is UL tested and certified to UL 1741 SA and provides advanced smart inverter functions. SunPower Type D AC modules are fully compliant with the California Rule 21 Phase 1 requirements, and the Rule 21 grid profile is easily set during commissioning with SunPower PVS5x monitoring hardware.

[sunpower.com](http://sunpower.com)

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AC Electrical Data <sup>3</sup>		
SRD Profile		IEEE 1547a-2014 <sup>3</sup> (default settings) min. / nom. / max. CA Rule 21 <sup>3</sup> min. / nom. / max.
Frequency (Hz)		59.5 / 60.0 / 60.5 58.5 / 60.0 / 60.5
Power Factor		0.99 / 1.00 / 1.00 0.85 lead. / 1.00 / 0.85 lag.
Reactive Power		±169 Var Volt-VAR
Voltage	@240 V @208 V	211.2 / 240 / 264 V 183 / 208 / 228.8 V
Max. Current	@240 V @208 V	1.33 A 1.54 A
DC/AC CEC Conversion Efficiency	@240 V @208 V	96.0% 95.5%
Max. Units Per 20 A Branch Circuit	@240 V @208 V	12 (single phase) 10 (two pole) wye
Power		320 W, 320 VA
No active phase balancing for 3 phase installations		

DC Power Data			
	X21-350-BLK-D-AC	X21-335-BLK-D-AC	X20-327-BLK-D-AC
Nominal Power <sup>4</sup> (Phom)	350 W	335 W	327 W
Power Tolerance	+5/-0%	+5/-0%	+5/-0%
Panel Efficiency <sup>5</sup>	21.5%	21.0%	20.4%
Temp. Coef. (Power)	-0.29%/°C		
Shade Tolerance	<ul style="list-style-type: none"> <li>• Three bypass diodes</li> <li>• Integrated module-level maximum power point tracking</li> </ul>		

Tested Operating Conditions	
Operating Temp.	-40° F to +149° F (-40° C to +65° C)
Max. Ambient Temp.	122° F (50° C)
Max. Load	Wind: 62 psf, 3000 Pa, 305 kg/m <sup>2</sup> front & back Snow: 125 psf, 6000 Pa, 611 kg/m <sup>2</sup> front
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)

Mechanical Data	
Solar Cells	96 Monocrystalline Moxeon Gen III
Front Glass	High-transmission tempered glass with anti-reflective coating
Environmental Rating	Outdoor rated
Frame	Class 1 black anodized (highest AAMA rating)
Weight	45.5 lbs (20.6 kg)
Recommended Max. Module Spacing	1.3 in. (33 mm)

<sup>1</sup> SunPower 327 W compared to a conventional panel on same-sized arrays (260 W, 16% efficient, approx. 1.6 m<sup>2</sup>), 4% more energy per watt (based on PVsyst pan files), 0.75%/yr. slower degradation (Campeau, Z. et al. *SunPower Module Degradation Rate*. San Jose CA, 2013).

<sup>2</sup> Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of January 2017.

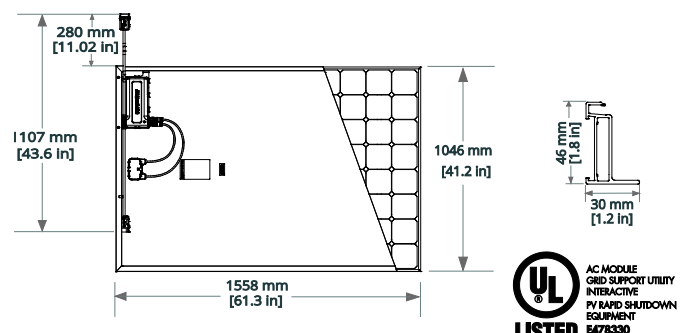
<sup>3</sup> #1 rank in "Fraunhofer PV Durability Initiative for Solar Modules: Part 3." *PV-Tech Power*, September 2015; Campeau, Z. et al. *SunPower Module Degradation Rate*. San Jose CA, 2013.

<sup>4</sup> Factory set to 1547a-2014 profile. CA Rule 21 profile set during commissioning. See the *Equinox Installation Guide #518101* for more information.

<sup>5</sup> Standard Test Conditions (1000 W/m<sup>2</sup> irradiance, AM 1.5, 25°C). NREL calibration standard: SOMS current, LACCS FF and voltage. All DC voltage is fully contained within the module.

See [www.sunpower.com/facts](http://www.sunpower.com/facts) for more reference information.

Warranties and Certifications	
Warranties	<ul style="list-style-type: none"> <li>• 25-year limited power warranty</li> <li>• 25-year limited product warranty</li> </ul>
	UL listed to UL 1741 SA <ul style="list-style-type: none"> <li>• SRDs: IEEE 1547-2003, IEEE 1547a-2014, CA Rule 21 Phase 1</li> <li>• PV Rapid Shutdown Equipment</li> <li>• Equipment Grounding</li> <li>• UL 6703, UL 9703 Connectors and cables (load break disconnection)</li> <li>• UL 1741 AC Module (Type 2 fire rating)</li> </ul>
Certifications	Enables installation in accordance with: <ul style="list-style-type: none"> <li>• NEC 690.6</li> <li>• NEC 690.12 Rapid Shutdown (inside and outside the array)</li> <li>• NEC 690.15 AC Connectors, 690.33(A) - (E)(1)</li> </ul> FCC and ICES-003 Class B When used with InvisiMount racking (UL 2703): <ul style="list-style-type: none"> <li>• Integrated grounding and bonding</li> <li>• Class A fire rated</li> </ul>
PID Test	Potential-induced degradation free



Please read the safety and installation instructions for details.



527031 RevA