



# SunPower® X-Series Residential Solar Panels | X21-335-BLK | X21-345



## More than 21% Efficiency

Ideal for roofs where space is at a premium or where future expansion might be needed.

## Maximum Performance

Designed to deliver the most energy in demanding real-world conditions, in partial shade and hot rooftop temperatures.<sup>1,2,4</sup>

## Premium Aesthetics

SunPower® Signature™ Black X-Series panels blend harmoniously into your roof. The most elegant choice for your home.



**Maxeon® Solar Cells: Fundamentally better**  
Engineered for performance, designed for durability.

## Engineered for Peace of Mind

Designed to deliver consistent, trouble-free energy over a very long lifetime.<sup>3,4</sup>

## Designed for Durability

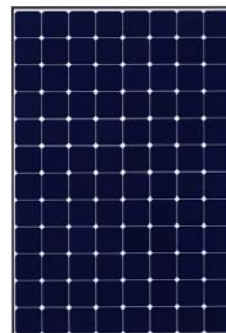
The SunPower Maxeon Solar Cell is the only cell built on a solid copper foundation. Virtually impervious to the corrosion and cracking that degrade conventional panels.<sup>3</sup>

Same excellent durability as E-Series panels. #1 Rank in Fraunhofer durability test.<sup>9</sup> 100% power maintained in Atlas 25+ comprehensive durability test.<sup>10</sup>

## Unmatched Performance, Reliability & Aesthetics



SIGNATURE™ BLACK  
SPR-X21-335-BLK



SPR-X21-345



## Highest Efficiency<sup>5</sup>

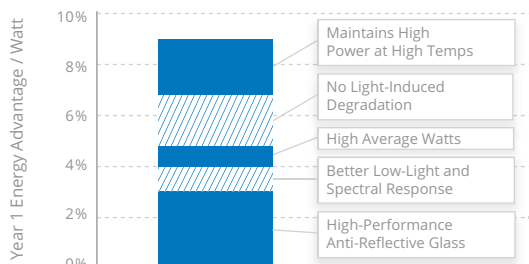
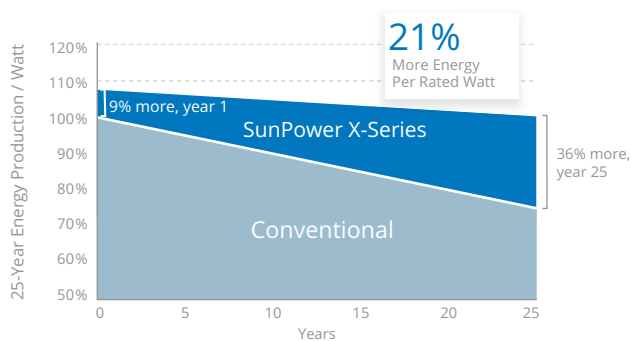
### Generate more energy per square foot

X-Series residential panels convert more sunlight to electricity by producing 38% more power per panel<sup>1</sup> and 70% more energy per square foot over 25 years.<sup>1,2,3</sup>

## Highest Energy Production<sup>6</sup>

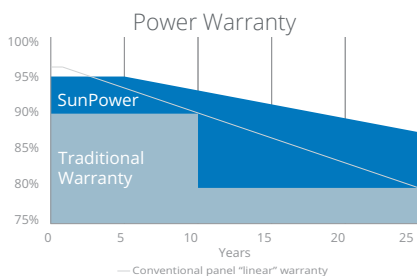
### Produce more energy per rated watt

High year-one performance delivers 8–10% more energy per rated watt.<sup>2</sup> This advantage increases over time, producing 21% more energy over the first 25 years to meet your needs.<sup>3</sup>

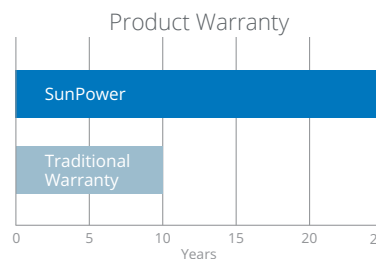


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## SunPower Offers The Best Combined Power And Product Warranty



More guaranteed power: 95% for first 5 years,  
-0.4%/yr. to year 25<sup>7</sup>



Combined Power and Product defect 25-year coverage<sup>8</sup>

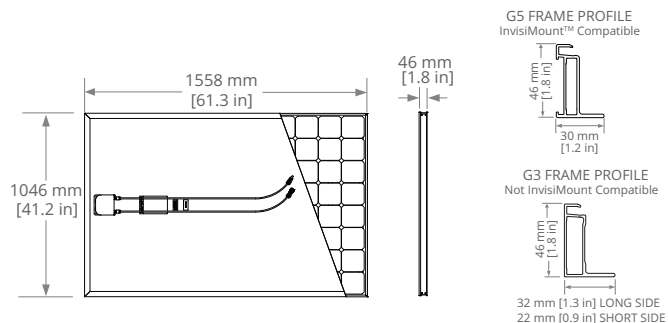
Electrical Data	SPR-X21-335-BLK	SPR-X21-345
	Nominal Power (P <sub>nom</sub> ) <sup>11</sup>	335 W
Power Tolerance	+5/-0%	+5/-0%
Avg. Panel Efficiency <sup>12</sup>	21.0%	21.5%
Rated Voltage (V <sub>mpp</sub> )	57.3 V	57.3 V
Rated Current (I <sub>mpp</sub> )	5.85 A	6.02 A
Open-Circuit Voltage (V <sub>oc</sub> )	67.9 V	68.2 V
Short-Circuit Current (I <sub>sc</sub> )	6.23 A	6.39 A
Max. System Voltage	600 V UL & 1000 V IEC	
Maximum Series Fuse	15 A	
Power Temp Coef.	-0.29% / °C	
Voltage Temp Coef.	-167.4 mV / °C	
Current Temp Coef.	2.9 mA / °C	

### REFERENCES:

- All comparisons are SPR-X21-345 vs. a representative conventional panel: 250 W, approx. 1.6 m<sup>2</sup>, 15.3% efficiency.
- Typically 8-10% more energy per watt, BEW/DNV Engineering "SunPower Yield Report," Jan 2013.
- SunPower 0.25%/yr degradation vs. 1.0%/yr conv. panel. Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, Feb 2013; Jordan, Dirk "SunPower Test Report," NREL, Q1-2015.
- "SunPower Module 40-Year Useful Life" SunPower white paper, May 2015. Useful life is 99 out of 100 panels operating at more than 70% of rated power.
- Highest of over 3,200 silicon solar panels, Photon Module Survey, Feb 2014.
- 1% more energy than E-Series panels, 8% more energy than the average of the top 10 panel companies tested in 2012 (151 panels, 102 companies), Photon International, Feb 2013.
- Compared with the top 15 manufacturers. SunPower Warranty Review, May 2015.
- Some restrictions and exclusions may apply. See warranty for details.
- X-Series same as E-Series, 5 of top 8 panel manufacturers tested in 2013 report, 3 additional panels in 2014. Ferrara, C., et al. "Fraunhofer PV Durability Initiative for Solar Modules: Part 2". Photovoltaics International, 2014.
- Compared with the non-stress-tested control panel. X-Series same as E-Series, tested in Atlas 25+ Durability test report, Feb 2013.
- Standard Test Conditions (1000 W/m<sup>2</sup> irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage.
- Based on average of measured power values during production.
- Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.
- See salesperson for details.

Tests And Certifications	
Standard Tests <sup>13</sup>	UL1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Quality Certs	ISO 9001:2008, ISO 14001:2004
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH SVHC-163, PV Cycle
Sustainability	Cradle to Cradle Certified™ Silver (eligible for LEED points) <sup>14</sup>
Ammonia Test	IEC 62716
Desert Test	10.1109/PVSC.2013.6744437
Salt Spray Test	IEC 61701 (maximum severity)
PID Test	Potential-Induced Degradation free: 1000 V <sup>9</sup>
Available Listings	UL, TUV, JET, MCS, CSA, FSEC, CEC

Operating Condition And Mechanical Data	
Temperature	-40° F to +185° F (-40° C to +85° C)
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Appearance	Class A+
Solar Cells	96 Monocrystalline Maxeon Gen III
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-65, MC4 compatible
Weight	41 lbs (18.6 kg)
Max. Load	G5 Frame: Wind: 62 psf, 3000 Pa front & back Snow: 125 psf, 6000 Pa front
	G3 Frame: Wind: 50 psf, 2400 Pa front & back Snow: 112 psf, 5400 Pa front
	Frame



G5 frames have no mounting holes. Please read the safety and installation guide.

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See [www.sunpower.com/facts](http://www.sunpower.com/facts) for more reference information.  
For more details, see extended datasheet: [www.sunpower.com/datasheets](http://www.sunpower.com/datasheets).