



# SunPower® X-Series Commercial Solar Panels | X21-345-COM

## More than 21% Efficiency

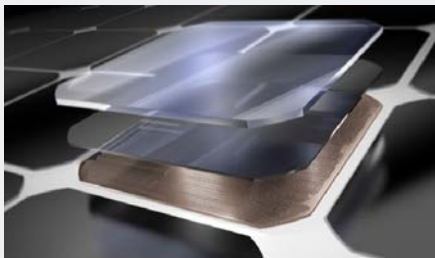
Captures more sunlight and generates more power than Conventional Panels.

## Maximum Performance

Designed to perform in demanding real world conditions of high temperatures, partial shade from overhead wires, and low light.<sup>1,2,4</sup>

## Commercial Grade

Intended for commercial sites where maximum energy production is critical.



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

## Engineered for Peace of Mind

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

## Designed for Reliability

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>

## High Performance & Excellent Reliability



SPR-X21-345-COM

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

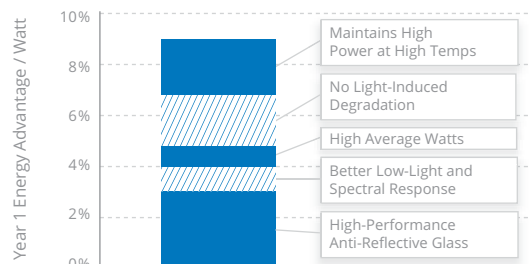
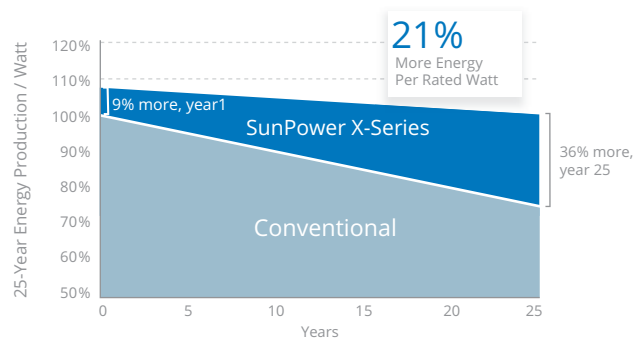
### Generate more energy per square foot

X-Series commercial panels convert more sunlight to electricity 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>

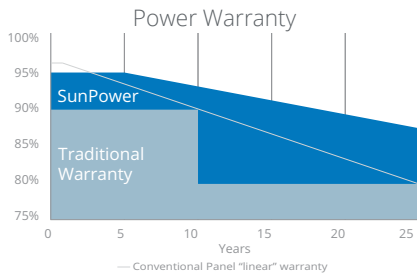
### Produce more energy per rated watt

More energy to power your operations. 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>

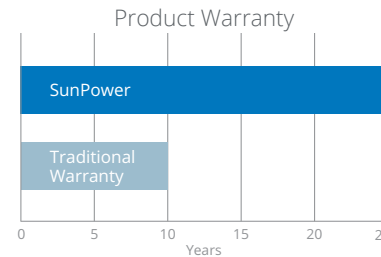


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## Sunpower Offers The Best Combined Power And Product Warranty



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 that includes panel replacement costs.<sup>8</sup>

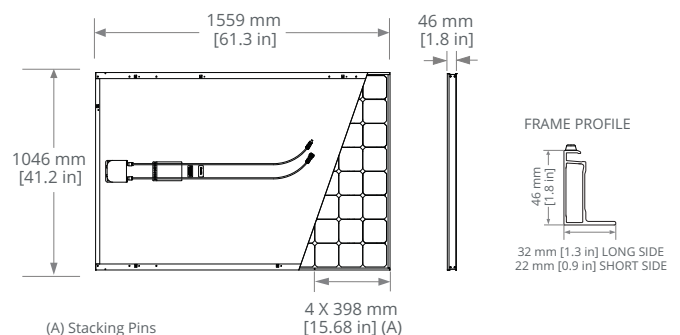
	Electrical Data	
	SPR-X21-345-COM	SPR-X20-327-COM
Nominal Power (Pnom) <sup>11</sup>	345 W	327 W
Power Tolerance	+5/-3%	+5/-3%
Avg. Panel Efficiency <sup>12</sup>	21.5%	20.3%
Rated Voltage (Vmpp)	57.3 V	57.3 V
Rated Current (Impp)	6.02 A	5.71 A
Open-Circuit Voltage (Voc)	68.2 V	67.6 V
Short-Circuit Current (Isc)	6.39 A	6.07 A
Max. System Voltage	1000 V UL & 1000 V IEC	
Maximum Series Fuse	15 A	
Power Temp Coef.	-0.30% / °C	
Voltage Temp Coef.	-167.4 mV / °C	
Current Temp Coef.	3.5 mA / °C	

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-155, PV Cycle
Sustainability	Cradle to Cradle (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: 1000V <sup>9</sup>
Available listings	UL, CEC, TUV

Operating Condition And Mechanical Data	
Temperature	-40°F to +185°F (-40°C to +85°C)
Impact resistance	1 inch (25mm) diameter hail at 52 mph (23 m/s)
Appearance	Class B
Solar Cells	96 Monocrystalline Moxeon Gen III
Tempered Glass	High transmission tempered Anti-Reflective
Junction Box	IP-65, MC4 Compatible
Weight	41 lbs (18.6 kg)
Max load	Wind: 2400 Pa, 50 psf front & back Snow: 5400 Pa, 112 psf front
Frame	Class 2 silver anodized; stacking pins

### REFERENCES:

- All comparisons are SPR-X21-345 vs. a representative conventional panel: 250W, 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 sales person for details.



Please read the safety and installation guide.

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

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