



## SunPower® P-Series: P19-335-BLK

# SunPower Performance Series Residential Panel

SunPower® Performance Series panels wrap front contact cells with 30+ years of SunPower materials and manufacturing expertise. The weakest points of Conventional Panel design are eliminated to deliver superior power, reliability, value and savings.<sup>1</sup>



### High Power

Enhanced active area increases power and savings while designing out fragile ribbons and solder bonds on the cells.



### High Performance and Lifetime Savings

Up to 35% more energy in the same space over 25 year.<sup>2</sup> Outperforms conventional panels in partial shade thanks to unique parallel circuitry. Proprietary bussing design limits power loss, maximizing production during morning and evening shading or soiling.

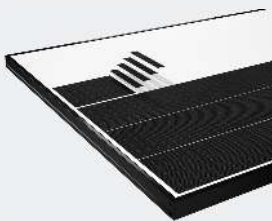


### High Reliability, Backed with Confidence

Performance Series is the most deployed shingled solar panel in the world,<sup>3</sup> with proven results. Innovative shingled design eliminates many of the reliability challenges of traditional front contact panels. SunPower stands behind its panels with its industry-leading Complete Confidence Warranty.



## Engineered for Performance



### Designed for Reliability

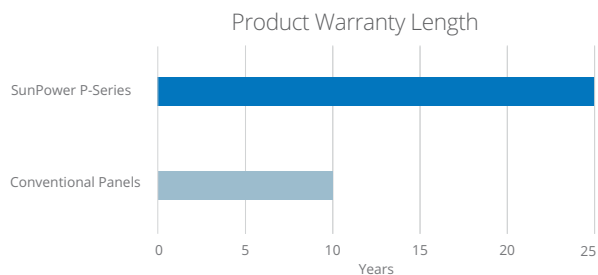
- Robust and flexible cell connection technology. Outstanding reliability.
- Conductive adhesive, proven in the aerospace industry
- Redundant cell to cell connections

### Proven Performance



- Named as a Top Performer in all DNV/GL reliability tests
- 15% more power and reduced panel temperature due to unique electrical bussing

### 25 Year Combined Warranty Protect your investment

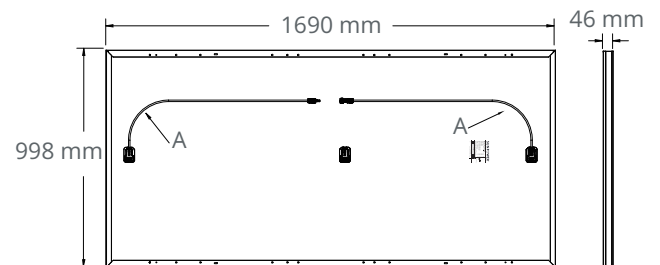


## P-Series: P19-335-BLK SunPower® Performance Series Residential Panel

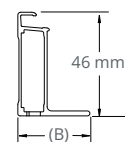
Electrical Data						
Model	SPR-P19-335-BLK	SPR-P19-330-BLK	SPR-P19-325-BLK	SPR-P19-320-BLK	SPR-P19-315-BLK	SPR-P19-310-BLK
Nominal Power (P <sub>nom</sub> ) <sup>4</sup>	335 W	330 W	325 W	320 W	315 W	310 W
Power Tolerance	+5/-0%	+5/-0%	+5/-0%	+5/-0%	+5/-0%	+5/-0%
Efficiency	19.9%	19.6%	19.3%	19.0%	18.7%	18.4%
Rated Voltage (V <sub>mpp</sub> )	37.1 V	36.8 V	36.5 V	36.2 V	36.1 V	35.9 V
Rated Current (I <sub>mpp</sub> )	9.04 A	8.97 A	8.90 A	8.84 A	8.73 A	8.63 A
Open-Circuit Voltage (V <sub>oc</sub> )	44.3 V	44.0 V	43.8 V	43.5 V	43.4 V	43.3 V
Short-Circuit Current (I <sub>sc</sub> )	9.60 A	9.53 A	9.46 A	9.38 A	9.31 A	9.24 A
Power Temp. Coef.	-0.37% / ° C					
Voltage Temp. Coef.	-0.29% / ° C					
Current Temp. Coef.	0.05% / ° C					
Maximum System Voltage	1000 V IEC					
Maximum Series Fuse	15 A					

Tests And Certifications (Preliminary)	
Standard Tests <sup>5</sup>	IEC 61215, IEC 61730
Quality Certs	ISO 9001:2008, ISO 14001:2004
EHS Compliance	OHSAS 18001:2007, Recycling Scheme
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
Available Listings	TUV

Operating Condition And Mechanical Data	
Temperature	-40° C to +85° C
Impact Resistance	25 mm diameter hail at 23 m/s
Appearance	Class A
Solar Cells	Monocrystalline PERC
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-67, MC4, 3 bypass diodes
Weight	18.7 kg
Max. Load	Wind: 2400 Pa, 245 kg/m <sup>2</sup> front & back Snow: 5400 Pa, 550 kg/m <sup>2</sup> front
Frame	Class 1 black anodized (highest AAMA rating)



### FRAME PROFILE



- (A) Portrait Cable: 1000 mm +/-15 mm
- (B) Long Side: 32 mm  
Short Side: 24 mm

Read safety and installation instructions before using this product.

### REFERENCES:

- 1 Independent Shade Study by CFV Laboratory.
- 2 SunPower 335 W compared to a Conventional Panel on same sized arrays (260 W, 16% efficient, approx. 1.6 m<sup>2</sup>), 0.6%/yr degradation (Leidos technical review 2017).
- 3 Osborne. "SunPower supplying P-Series modules to a 125MW NextEra project." PV-Tech.org. March 2017.
- 4 Measured at Standard Test Conditions (STC): irradiance of 1000 W/m<sup>2</sup>, AM 1.5, and cell temperature 25° C.
- 5 Class C fire rating per IEC 61730.

See [www.sunpowercorp.co.uk/company/about-sunpower](http://www.sunpowercorp.co.uk/company/about-sunpower) for more reference information.

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