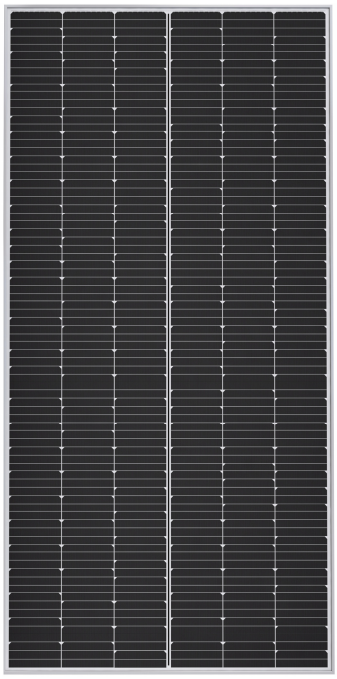
SUNPOWER®



SunPower® P19-410-COM

SunPower® Performance Panel for Commercial Installations

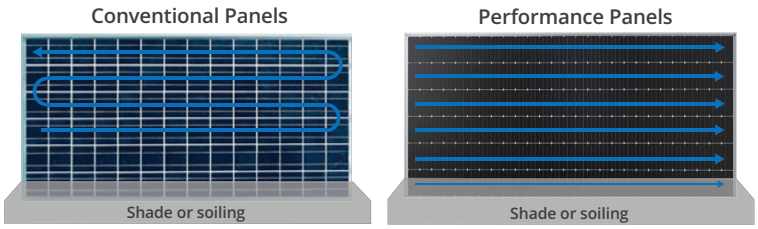
SunPower Performance Panels wrap front contact cells with 30+ years of SunPower materials and manufacturing expertise. The weakest points of Conventional Panel design are eliminated to deliver superior power, reliability, value and savings.[1]

High Power

Enhanced active area and mono PERC cells optimize power density, while lowering system costs.

High Performance

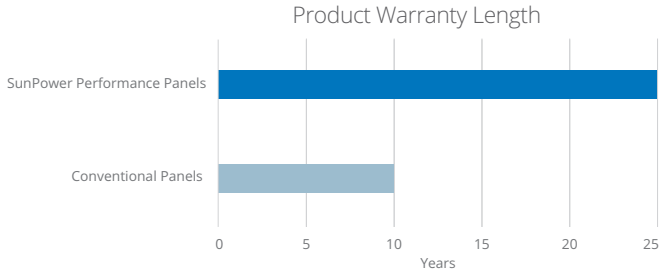
Up to 31% more energy in the same space over 25 years.[2] Unique parallel circuitry maximizes energy production during morning and evening row-to-row shading, or when panels become soiled.



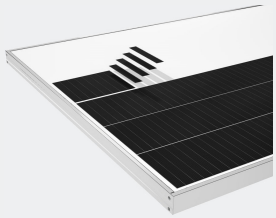
High Reliability

SunPower Performance Panels are the most deployed shingled solar panel in the world.[3] Innovative cell shingling mitigates the leading reliability challenges associated with conventional front contact panels by designing out fragile ribbons and solder bonds on the cells. SunPower stands behind its panels with its industry-leading Complete Confidence Warranty. SunPower's Performance Panels are warranted to produce more than 97% power in the first year, then declining by 0.6% per year, ending at 82.6% power after 25 years.

25 Year Combined Warranty



Engineered for Performance



Innovative Design

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

Proven Performance

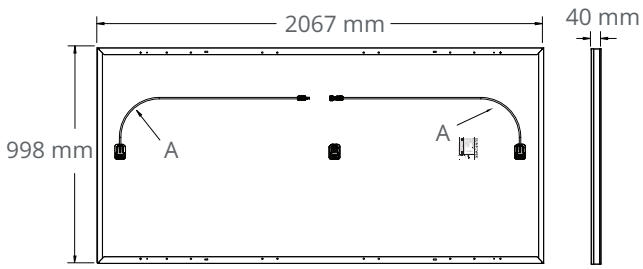
- Named as a Top Performer in all DNV/GL reliability tests.
- Reduced panel temperature due to unique electrical bussing.

P19-410-COM: SunPower® Performance Panel for Commercial Installations

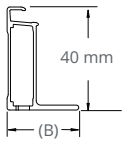
Electrical Data						
Model	SPR-P19-410-COM	SPR-P19-405-COM	SPR-P19-400-COM	SPR-P19-395-COM	SPR-P19-390-COM	SPR-P19-385-COM
Nominal Power (Pnom)[4]	410 W	405 W	400 W	395 W	390 W	385 W
Power Tolerance	+5/−0%	+5/−0%	+5/−0%	+5/−0%	+5/−0%	+5/−0%
Efficiency	19.9%	19.6%	19.4%	19.2%	18.9%	18.7%
Rated Voltage (Vmpp)	45.7 V	45.3 V	44.8 V	44.4 V	44.1 V	43.8 V
Rated Current (Impp)	8.98 A	8.94 A	8.93 A	8.90 A	8.85 A	8.80 A
Open-Circuit Voltage (Voc)	54.5 V	54.0 V	53.6 V	53.4 V	52.9 V	52.5 V
Short-Circuit Current (Isc)	9.55 A	9.53 A	9.50 A	9.47 A	9.45 A	9.44 A
Maximum System Voltage	1000 V IEC					
Maximum Series Fuse	18 A					
Power Temp. Coef.	−0.36% / ° C					
Voltage Temp. Coef.	−0.29% / ° C					
Current Temp. Coef.	0.05% / ° C					

Tests And Certifications	
Standard Tests[5]	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	MIL-STD-810G
Salt Spray Test	IEC 61701 (maximum severity)
PID Test	Potential-Induced Degradation free: 1000 V
LeTID Test[6]	IEC 61215 (MQT 23.1 LeTID detection) draft standard
Available Listings	TUV, MCS

Operating Condition And Mechanical Data	
Temperature	–40° C to +85° C
Impact Resistance	25 mm diameter hail at 23 m/s
Solar Cells	Monocrystalline PERC
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-67, Multi-Contact (MC4), 3 bypass diodes
Weight	22 kg
Max. Load	Wind: 2400 Pa, 245 kg/m² front & back Snow: 5400 Pa, 550 kg/m² front
Frame	Class 2 silver anodized



FRAME PROFILE



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

Read safety and installation instructions before using this product.

1 Independent Shade Study by CFV Laboratory.
2 SunPower 405 W, 19.6% efficient, compared to a Conventional Panel on same-sized arrays (310 W, 16% efficient, approx. 2 m²), 2% more energy per watt (based on PVSyst pan files for avg EU climate), 0.25%/yr slower degradation rate (Leidos Report. "SunPower P-Series Technology 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/m², AM 1.5, and cell temperature 25° C.
5 Class C fire rating per IEC 61730.
6 Fraunhofer CSP LID Sensitivity according to IEC 61215 (MQT 23.1 LeTID detection), <1% power loss.

See www.sunpowercorp.co.uk/company/about-sunpower for more reference information.
Specifications included in this datasheet are subject to change without notice.

SUNPOWER®

UK: 0 8082818718 | Other EU: 00 800 855 81111

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