

SunPower Performance 7

Home Solar Panel

440–455 W | SPR-P7-XXX-BLK-1500



Bifacial energy generation



Framed glass-glass



One-third cut, shingled-cell design



Hail: 40 mm (27.5 m/s)



Fire Rating: Class A (IEC/UL)

High lifetime energy production

The shingled-cell design helps to manage shade and keep cell temperatures low to produce more power over time.

Made for real weather

It's strong frame and cell connection design helps to protect the panels against weather challenges like temperature swings, snow loads, and hail.

No sacrifices for curb appeal

Smaller metallic wires help to achieve a sleek black appearance to seamlessly integrate into your roof.

Sustainable at its core

As one of the top 50 most sustainable companies,¹ Moxon designs panels with sustainability in mind – from materials and manufacturing to conflict tracing and zero tolerance of labour rights violations.

Corporate Knights



A better product, a better warranty

SunPower Performance 7 panels are covered by a 30-year warranty.² Manufactured for long-term durability—covering defects related to workmanship and materials for a full 30 years.

Product and power coverage	30 Years
Year 1 minimum warranted output	99.0%
Maximum annual degradation	0.4%

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Learn more about SunPower Performance panels
sunpower.maxeon.com



Performance 7 POWER: 440–455 W | EFFICIENCY: Up to 22.4%

Electrical Data, Front STC Characteristics ³				
	SPR-P7-455-BLK-1500	SPR-P7-450-BLK-1500	SPR-P7-445-BLK-1500	SPR-P7-440-BLK-1500
Nominal Power (P _{nom}) ⁴	455 W	450 W	445 W	440 W
Power Tolerance	+3/0%	+3/0%	+3/0%	+3/0%
Panel Efficiency	22.4%	22.2%	21.9%	21.7%
Rated Voltage (V _{mpp})	35.70 V	35.45 V	35.20 V	34.95 V
Rated Current (I _{mpp})	12.75 A	12.70 A	12.65 A	12.60 A
Open-Circuit Voltage (V _{oc}) ⁴	42.13 V	41.95 V	41.77 V	41.59 V
Short-Circuit Current (I _{sc}) ⁴	13.45 A	13.38 A	13.32 A	13.29 A

Bifacial Gain ⁵				
P _{max} with 5% Bifacial Gain	478 W	473 W	467 W	462 W
I _{sc} with 5% Bifacial Gain	14.12 A	14.05 A	13.99 A	13.95 A
P _{max} with 10% Bifacial Gain	501 W	495 W	490 W	484 W
I _{sc} with 10% Bifacial Gain	14.80 A	14.72 A	14.65 A	14.62 A
P _{max} with 20% Bifacial Gain	546 W	540 W	534 W	528 W
I _{sc} with 20% Bifacial Gain	16.14 A	16.06 A	15.98 A	15.95 A

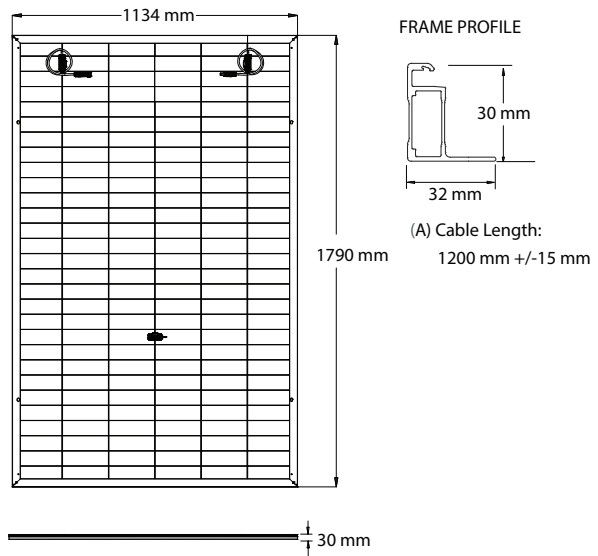
BNPI Data ⁶				
Nominal Power (P _{max}) ⁴	499 W	494 W	488 W	483 W
Open-Circuit Voltage (V _{oc}) ⁴	42.26 V	42.10 V	41.90 V	41.73 V
Short-Circuit Current (I _{sc}) ⁴	14.78 A	14.71 A	14.63 A	14.61 A

Electrical Data	
Bifaciality (φP _{max} / φI _{sc})	80% +/-10%
Bifaciality (φV _{oc})	98% +/-2%
Maximum System Voltage	1500 V IEC
Temperature	-40°C to +85°C
Maximum Series Fuse	25 A
Power Temp. Coef.	-0.29% / °C
Voltage Temp. Coef.	-0.25% / °C
Current Temp. Coef.	0.045% / °C

Packaging Configuration	
Number of modules per pallet	36
Number of pallets per 40ft HQ container	24
Number of modules per container	864

Tests And Certifications	
Standard Tests	IEC 61215, IEC 61730
Fire Rating	Class A (IEC 61730-2 / UL 790)
Quality Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	ISO 45001-2018, Recycling Scheme
Cradle to Cradle Certified™ Bronze	Panel line certified for material health, water stewardship, material reutilization, renewable energy & carbon management, and social fairness. ⁷

Mechanical Data	
Solar Cells	N-type TOPCon
Glass	2.0 mm + 2.0 mm, high transmission heat strengthened glass, AR coating on front glass
Junction Box	IP-68, 3 bypass diodes
Connector	Stäubli PV-KST4-EVO2/xy_UR; PV-KBT4-EVO2/xy_UR
Weight	24.8 kg
Max. Load ⁸	Wind: 4000 Pa, 408 kg/m ² front & back Snow: 6000 Pa, 611 kg/m ² front
Impact Resistance	40 mm diameter hail at 27.5 m/s
Frame	Black anodized aluminum alloy



1 Corporate Knights Global 100 Ranking 2024:

<https://www.corporateknights.com/rankings/global-100-rankings/2024-global-100-rankings/the-20th-annual-global-100/>

2 Performance 7 solar panels are backed by a 30-year warranty. Subject to terms and conditions. Not available in all countries. 30-year warranty requires registration, otherwise our 25-year warranty applies. Not available for earlier generation Performance panels, where a 25-year warranty applies.

3 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard SOMS current, LACCS FF and Voltage.

4 Measurement tolerances (P_{max} +/-3%, V_{oc} +/-3%, I_{sc} +/-4%).

5 The additional gain from the back side of the panel compared to the power of the front side of the panel at the standard test conditions. It depends on mounting (structure, height, tilt angle etc.) and albedo of the underlying surface.

6 BNPI Test Condition (front 1000 W/m², rear 135 W/m² irradiance, AM 1.5, 25° C).

7 Performance DC panels are Cradle to Cradle Certified™ Bronze -

www.c2ccertified.org/certified-products/maxeon-performance-solar-panels. Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.

8 As per IEC 61215:2021 tested and certified. See Safety and Installation Guideline for details.

Designed in U.S.A.

Assembled in China

Specifications included in this datasheet are subject to change without notice.

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View warranty, patent and trademark information at maxeon.com/legal.



Please read the safety and installation instructions.

Visit www.sunpower.maxeon.com/int/PVInstallGuideIEC.

Paper version can be requested through techsupport.ROW@maxeon.com.

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