

PERFORMANCE 6 COM | 485-510

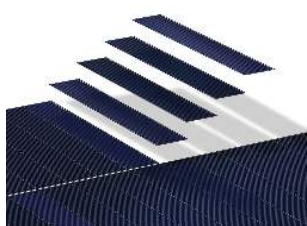
POWER RANGE: 485-510 W

The SunPower Performance P6-COM-S-BF panel is engineered to meet the unique needs of solar power plants. Bifacial power generation and G12 (210mm) cell technology combine to maximise power density, while its framed glass/glass construction offers greater durability for extended panel life.

Backed by an comprehensive warranty and an estimated 35-year useful life,¹ SunPower Performance panels wrap conventional front contact cells with 35 years of materials, engineering and manufacturing expertise to mitigate the reliability challenges of Conventional Panel design.

Engineered for Performance

- Smaller cells stay cooler when shaded, extending panel life³
- An advanced encapsulant minimizes degradation from environmental exposure
- Conductive adhesive defends against daily temperature swings
- Redundant cell connections create flexible paths for continuous electricity flow



Durability that Translates to More Energy

Engineered to stand up to environmental stresses such as shading, daily temperature swings and high humidity, the SunPower Performance P6 COM is a high power panel uniquely suited for power plant EPCs and developers looking to maximize energy production.

A Track Record of Innovation Leadership

SunPower Performance panels represent the most deployed shingled cell panel in the industry—innovation protected by a growing portfolio of patents worldwide.²



6+ GW
Deployed



60+
Countries



90+
Patents

A Better Product. A Better Warranty.

SunPower Performance panel is backed by the SunPower Performance COM panel warranty providing 25-year product and power coverage.

- Year 1 Minimum Warranted Power Output 98.0%
- Maximum Annual Degradation 0.45%
- Year 25 Warranted Power Output 87.2%

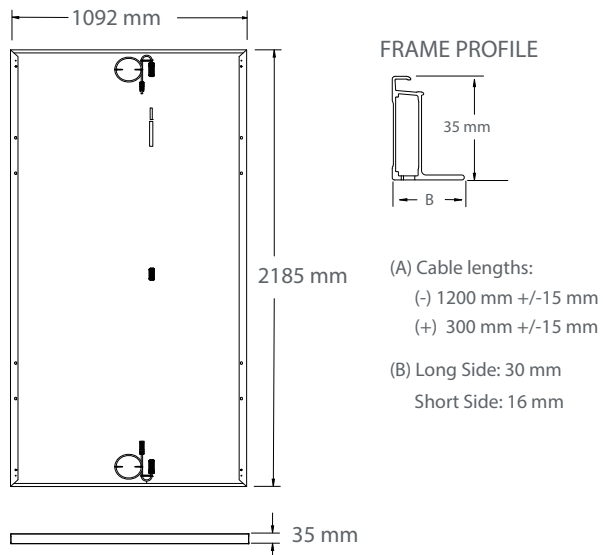
Electrical Data, Front STC Characteristics ⁴						
	SPR-P6-510-COM-S-BF	SPR-P6-505-COM-S-BF	SPR-P6-500-COM-S-BF	SPR-P6-495-COM-S-BF	SPR-P6-490-COM-S-BF	SPR-P6-485-COM-S-BF
Nominal Power (P _{nom})	510 W	505 W	500 W	495 W	490 W	485 W
Power Tolerance	+3/0%	+3/0%	+3/0%	+3/0%	+3/0%	+3/0%
Efficiency	21.4%	21.2%	21.0%	20.7%	20.5%	20.3%
Rated Voltage (V _{mpp})	36.7 V	36.4 V	36.2 V	36.0 V	35.7 V	35.4 V
Rated Current (I _{mpp})	13.92 A	13.88 A	13.82 A	13.77 A	13.73 A	13.71 A
Open-Circuit Voltage (V _{oc}) (+/-3%)	43.4 V	43.3 V	43.2 V	43.1 V	43.0 V	42.9 V
Short-Circuit Current (I _{sc}) (+/-3%)	14.82 A	14.76 A	14.71 A	14.65 A	14.59 A	14.56 A

Bifacial Gain ⁵						
P _{max} with 5% Bifacial Gain	536 W	530 W	525 W	520 W	515 W	509 W
I _{sc} with 5% Bifacial Gain	15.56 A	15.50 A	15.44 A	15.38 A	15.32 A	15.29 A
P _{max} with 10% Bifacial Gain	561 W	556 W	550 W	545 W	539 W	534 W
I _{sc} with 10% Bifacial Gain	16.30 A	16.24 A	16.18 A	16.12 A	16.05 A	16.02 A
P _{max} with 20% Bifacial Gain	612 W	606 W	600 W	594 W	588 W	582 W
I _{sc} with 20% Bifacial Gain	17.78 A	17.72 A	17.65 A	17.58 A	17.51 A	17.47 A

Mechanical Data	
Impact Resistance	25 mm diameter hail at 23 m/s
Solar Cells	Monocrystalline PERC
Glass	2.0mm, Heat Strengthened Glass
Junction Box	IP-68, 3 bypass diodes
Connector	Zerun Z4S or Stäubli Evo2
Weight	29.6 kg
Max. Load	Wind: 2400 Pa, 245 kg/m ² front & back Snow: 5400 Pa, 550 kg/m ² front
Frame	Anodized Aluminum Alloy

Electrical Data	
Bifaciality (φP _{max})	70% +/-10%
Maximum System Voltage	1500 V IEC
Temperature	-40°C to +85°C
Maximum Series Fuse	25 A
Power Temp. Coef.	-0.34% / °C
Voltage Temp. Coef.	-0.26% / °C
Current Temp. Coef.	0.05% / °C

Tests And Certifications	
Standard Tests	IEC 61215, IEC 61730 Rated to 1500 V
Fire Rating	Class C (IEC 61730)
Quality Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	ISO 45001-2018, Recycling Scheme
Ammonia Test	IEC 62716
Dust and Sand	IEC 60068-2-68
Salt Spray Test	IEC 61701 (maximum severity)
LeTID Test	TUV 2fg 2689/04.19 (LeTID Detection)
PID Test	IEC 62804



- 1 Performance panels expected useful life of 35 years. Source: "SunPower P-Series Technology Technical Review," Leidos Independent Engineer Report. 2016.
- 2 Osborne. "SunPower supplying P-Series modules to a 125MW NextEra project." PV-Tech.org. March 2017.
- 3 SunPower Performance Series – Thermal Performance, Z.Campeau 2016.
- 4 Measured at Standard Test Conditions (STC): irradiance of 1000 W/m², AM 1.5, and cell temperature 25° C.
- 5 The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

Designed in the U.S.A.
Assembled in China

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

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