

Solaria PowerX+-400R Performance Series

Achieving over 20.5% efficiency, Solaria PowerX+ Performance solar panels feature Solaria's core cell cutting technology, offering higher-power and attractive black-on-black aesthetics compared to conventional solar panels. Solaria has been the market leader in cut-cell technologies for over a decade. With a comprehensive 30-year warranty, PowerX+ delivers the latest in power and reliability for homeowners.



High Efficiency, High Power

At 400 watts and 20.5% efficiency, Solaria PowerX+ solar panels are one of the highest power residential panels available.



High Quality and Reliability

State-of-the-art cell cutting technology and advanced panel construction ensure that PowerX+ panels are highly reliable and designed to far exceed the industry-leading 30-year warranty.



All Black Aesthetics

Compared to conventional panels, Solaria PowerX+ panels have a more uniform all-black appearance.



Best System Value

Solaria PowerX+ solar panels produce more power per square meter area. This reduces installation costs due to fewer balance of system components.



Improved Shading Tolerance

Sub-strings are interconnected in parallel, which dramatically lowers the shading losses and boosts energy yield.



Low Light Performance

PowerX+ maintains high efficiency at low irradiance further ensuring maximum energy yield.



Bi-Facial Power Capacity

PowerX+ bi-facial panels are designed to support up to 30% more power production when both sides can be reached by sunlight. When sunlight does not reach both sides of the panel, this translates to an extra 30% margin of electrical safety and reliability.



About Solaria

Established in 2000, The Solaria Corporation has created one of the industry's most respected IP portfolios, with over 250 issued and pending patents in PV solar cell and module technology. Headquartered in California, Solaria has developed a technology platform that unlocks the potential of solar energy.

Performance at STC (1000W/m², 25° C, AM 1.5)

Solaria PowerX-		390R-4T	395R-4T	400R-4T
Max Power (P _{max})	[W]	390	395	400
Efficiency	[%]	20.0	20.2	20.5
Open Circuit Voltage (V _{oc})	[V]	36.9	37.1	37.3
Short Circuit Current (I _{sc})	[A]	13.52	13.60	13.68
Max Power Voltage (V _{mp})	[V]	30.6	30.8	31.0
Max Power Current (I _{mp})	[A]	12.73	12.82	12.9
Power Tolerance	[%]	-0/+3	-0/+3	-0/+3

Performance at NOCT (800W/m², 20° C Amb, Wind 1 m/s, AM 1.5)

Max Power (P _{max})	[W]	290	293	297
Open Circuit Voltage (V _{oc})	[V]	34.3	34.5	34.7
Short Circuit Current (I _{sc})	[A]	11.01	11.10	11.13
Max Power Voltage (V _{mp})	[V]	28.50	28.60	28.76
Max Power Current (I _{mp})	[A]	10.20	10.26	10.32

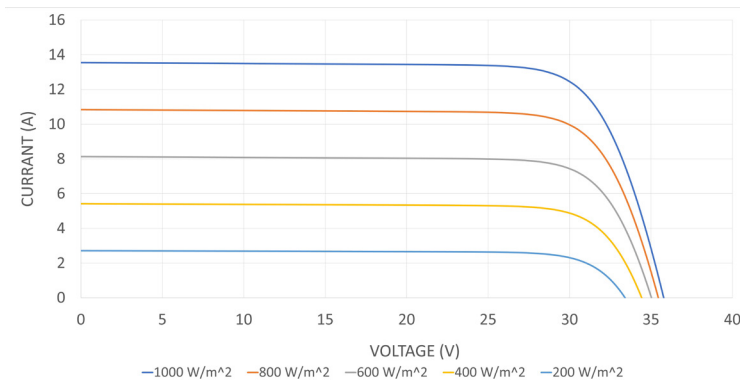
Temperature Characteristics

NOCT	[°C]	45 +/-2
Temp. Coeff. of P _{max}	[% / °C]	-0.36
Temp. Coeff. of V _{oc}	[% / °C]	-0.28
Temp. Coeff. of I _{sc}	[% / °C]	0.048

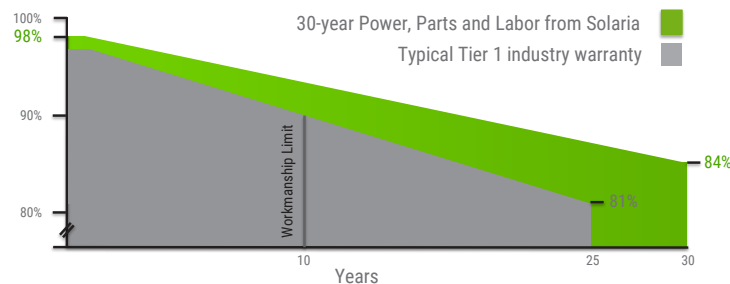
Design Parameters

Operating temperature	[°C]	-40 to +85
Max System Voltage	[V]	1000
Max Fuse Rating	[A]	25
Bypass Diodes	[#]	3

IV Curves vs. Irradiance (400W Panel)



Comprehensive 30-Year Warranty



Mechanical Characteristics

Cell Type	Monocrystalline Silicon
Dimensions (L x W x H)	67.8" x 44.7" x 1.4"
	1723mm x 1134mm x 35mm
Weight	22.1 kg / 48.7 lbs
Glass Type / Thickness	AR Coated, Tempered / 3.2mm
Backsheet	Transparent, Black Mesh, Polymeric
Frame Type	Black Anodized Aluminum
Cable Type / Length	12 AWG PV Wire (UL) / 1100mm
Connector Type	Staubli MC4
Junction Box	IP68 / 3 diodes
Front Load	5400 Pa / 113 psf*
Rear Load	2400 Pa / 50 psf*

* Refer to Solaria Installation Manual for details

Certifications / Warranty

Certifications	UL 61730 / IEC 61215 / IEC 61730
Fire Type (UL 1703)	2
Power, Parts & Labor Warranty	30 years*

* Warranty details at www.solaria.com

Packaging

Stacking Method	Vertical / Palletized
Panels/ Pallet	31
Pallet Dims (L x W x H)	69.3" x 44.3" x 49.3"
	1760mm x 1125mm x 1253mm
Pallet Weight	745 kg / 1642 lbs
Pallets / 40-ft Container	26
Panels / 40-ft Container	806

