SOLARIA®

Solaria PowerXT® | DC Panel

Solaria PowerXT®-440C-PD

Achieving 20% efficiency, Solaria PowerXT-C solar panels are one of the highest power panels in the residential and commercial solar market. Compared to conventional panels, Solaria PowerXT panels have fewer gaps between the solar cells; this leads to higher power and superior aesthetics. Solaria PowerXT Pure Black™ panels are manufactured with black backsheet and frames, enhancing a home or building's architectural beauty.

Developed in California, Solaria's patented cell cutting and panel assembly takes processed solar wafers and turns them into PowerXT solar panels. The process starts by creating a highly reliable PowerXT cell where busbars and ribbon interconnections are eliminated. Solaria then packages the cells into the PowerXT solar panel, reducing inactive space between the cells. This process leads to an exceptionally cost effective and efficient solar panel.

Higher Efficiency, Higher Power

Solaria PowerXT-C panels achieve up to 20% efficiency; conventional panels achieve 15% – 17% efficiency. Solaria PowerXT panels are one of the highest power panels available.

Lower System Costs

Solaria PowerXT 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, within each of the four panel quadrants, which dramatically lowers the shading losses and boosts energy yield.

Improved Aesthetics

Compared to conventional panels, Solaria PowerXT panels have a more uniform appearance and improved aesthetics.

Durability and Reliability

Solder-less cell interconnections are highly reliable and designed to far exceed the industry leading 25 year warranty.

About Solaria

Established in 2000, The Solaria Corporation has created one of the industry's most respected IP portfolios, with over 350 issued and pending patents in PV solar cell and module technology. Headquartered in Oakland, California, Solaria has developed a technology platform that unlocks the potential of solar energy.

TOP PERFORMER 2018 DNV·GL PV MODULE RELIABILITY SCORECARD

TÜVRheinland® Precisely Right.

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Rev 2J 12-2019

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

Solaria PowerXT-		420C-PD	430C-PD	440C-PD
Max Power (P_{max})	[W]	420	430	440
Efficiency	[%]	19.4	19.9	20.3
Open Circuit Voltage (V_{oc})	[V]	47.1	47.3	47.9
Short Circuit Current (I_{sc})	[A]	11.39	11.43	11.49
Max Power Voltage (V_{mp})	[V]	38.8	39.3	39.8
Max Power Current (I_{mp})	[A]	10.82	10.93	11.05
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 (Pmax)	[W]	309	316	324
Open Circuit Voltage (V_{oc})	[V]	44.3	44.5	45.0
Short Circuit Current (I_{sc})	[A]	9.18	9.22	9.27
Max Power Voltage (V_{mp})	[V]	35.7	36.2	36.6
Max Power Current (I_{mp})	[A]	8.65	8.74	8.83

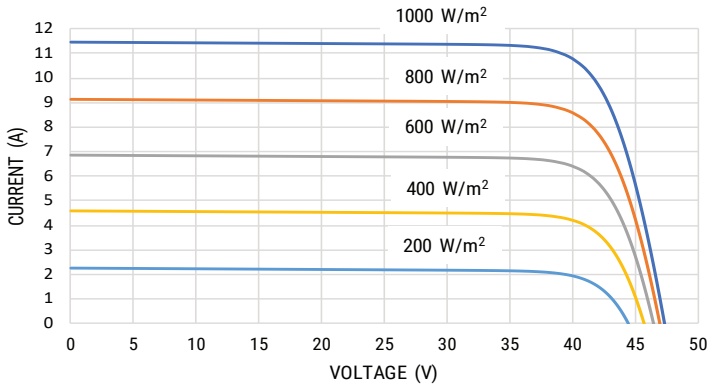
Temperature Characteristics

NOCT	[°C]	45 +/-2
Temp. Coeff. of P_{max}	[% / °C]	-0.39
Temp. Coeff. of V_{oc}	[% / °C]	-0.29
Temp. Coeff. of Isc	[% / °C]	0.04

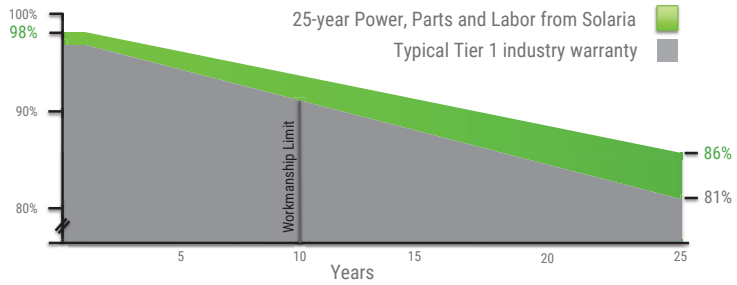
Design Parameters

Operating temperature	[°C]	-40 to +85
Max System Voltage	[V]	1000
Max Fuse Rating	[A]	20
Bypass Diodes	[#]	4

IV Curves vs. Irradiance (430W Panel)



Comprehensive 25-Year Warranty



Mechanical Characteristics

Cell Type	Monocrystalline Silicon
Dimensions (L x W x H)	76.3" x 43.9" x 1.57" 1939mm x 1116mm x 40mm
Weight	29 kg / 64 lbs
Glass Type / Thickness	AR Coated, Tempered / 4.0mm
Frame Type	Black Anodized Aluminum
Cable Type / Length	12 AWG PV Wire (UL) / 1200mm
Connector Type	MC4
Junction Box	IP67 / 4 diodes
Front Load	5400 Pa / 113 psf*
Rear Load	2400 Pa / 50 psf*

* Refer to Solaria Installation Manual for details

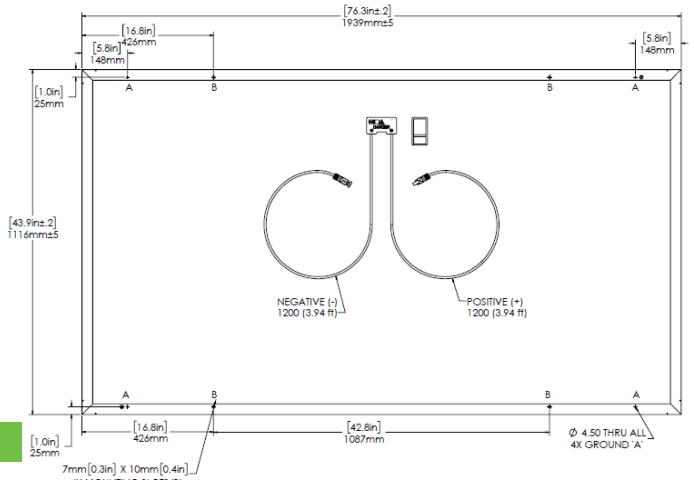
Certifications / Warranty

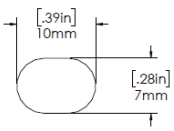
Certifications	UL 1703/CEC IEC 61215/IEC 61730
Fire Type (UL 1703)	Type-1
Warranty	25 years*

* Warranty details at www.solaria.com

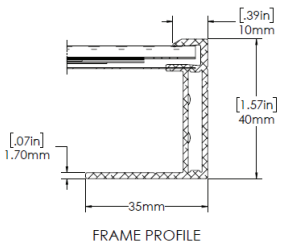
Packaging

Stacking Method	Horizontal / Palletized
Panels / Pallet	25
Pallet Dims (L x W x H)	78.27" x 45.27" x 48.42" 1988 x 1150 x 1230 mm
Pallet Weight	748 kg / 1650 lbs
Pallets / 40-ft Container	22
Panels / 40-ft Container	550





MOUNTING SLOT 'B'



FRAME PROFILE