



TSC PowerXT® | DC Panel



PowerXT®-400R-PM

Achieving over 20% efficiency, TSC PowerXT solar panels are one of the highest power panels in the residential and commercial market. Compared to traditional panels, PowerXT panels have fewer gaps between the solar cells and are manufactured with black backsheet and frames, giving them a striking appearance and higher efficiency.

Developed in America, TSC's patented cell cutting creates a highly reliable PowerXT cell where busbars and ribbon interconnections, common failure points, are eliminated. TSC's patented panel assembly then packages the cells into the PowerXT solar panel, reducing inactive space between the cells. This process leads to an exceptionally attractive and efficient solar panel.

Higher Efficiency, Higher Power

TSC PowerXT panels achieve over 20% efficiency; traditional panels achieve 15% – 17% efficiency. TSC PowerXT panels are one of the highest power panels available.

Lower System Costs

PowerXT panels produce more power per square meter area. This reduces installation costs due to fewer balance of system components such as racking and cables.

Improved Shading Tolerance

Solar cell sub-strings are interconnected in parallel, within each of the four module quadrants, which dramatically lowers the shading losses and boosts energy yield.

Improved Aesthetics

Compared to traditional panels, PowerXT panels have a more uniform appearance and superior aesthetics, with a pure black photovoltaic panel.

Durability and Reliability

Solder-less cell interconnections are highly reliable and designed to exceed the industry leading product and power warranty of 25 years.

PID Resistant

PowerXT panels are PID resistant. This insures stable and predictable energy production over time.

About TSC

TSC is the European division of an U.S. Silicon Valley company that has been operating in the photovoltaic (PV) industry for 20 years and holds over 250 issued and pending patents in PV solar cell and module technology. TSC and its parent company are leading the industry in high performance, Pure Black™ solar panels for residential and commercial applications.



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

Solaria PowerXT-		400R-PM
Max Power (P _{max})	[W]	400
Efficiency	[%]	20.2
Open Circuit Voltage (V _{oc})	[V]	51.1
Short Circuit Current (I _{sc})	[A]	9.82
Max Power Voltage (V _{mp})	[V]	42.4
Max Power Current (I _{mp})	[A]	9.41
Power Tolerance	[%]	-0/+3

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

Max Power (P _{max})	[W]	295
Open Circuit Voltage (V _{oc})	[V]	48.1
Short Circuit Current (I _{sc})	[A]	7.92
Max Power Voltage (V _{mp})	[V]	40.0
Max Power Current (I _{mp})	[A]	7.59

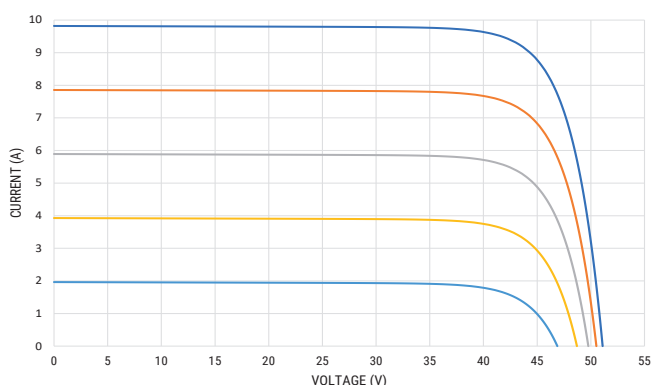
Temperature Characteristics

NOCT	[°C]	45 +/-2
Temp. Coeff. of P _{max}	[% / °C]	-0.39
Temp. Coeff. of V _{oc}	[% / °C]	-0.29
Temp. Coeff. of I _{sc}	[% / °C]	0.04

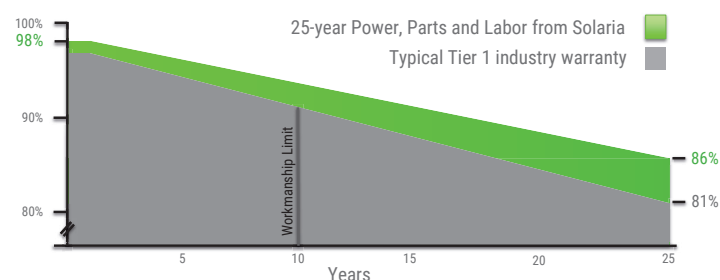
Design Parameters

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

IV Curves vs. Irradiance (400W Panel)



Comprehensive 25-Year Warranty



Mechanical Characteristics

Cell Type	Monocrystalline Silicon
Dimensions (L x W x H)	64.72" x 47.4" x 1.57"
	1644mm x 1204mm x 40mm
Weight	21 kg
Glass Type / Thickness	AR Coated, Tempered / 2.84mm
Frame Type	Black Anodized Aluminum
Cable Type / Length	PV Wire / 1000mm
Connector Type	MC4
Junction Box	IP67 / 4 diodes
Front Load	5400 Pa*
Rear Load	3600 Pa*

*Refer to Installation manual for details

Certifications / Warranty

Certifications	UL 61730, CAN/CSA-C22.2 IEC 61215, IEC 61730
Fire Type, UL 1703 (US)	Type 1
Fire Class, UIA 9174 (Italy)	Class 1
Power, Parts & Labor Warranty	25 years*

*Warranty details at www.solaria.com/europe

Packaging

Stacking Method	Horizontal / Palletized
Panels/ Pallet	25
Pallet Dims (L x W x H)	66.57" x 48.7" x 48.4"
	1691mm x 1238mm x 1230 mm
Pallet Weight	590 kg
Pallets / 40-ft Container	18
Panels / 40-ft Container	450

