

Solaria PowerXT™ | Residential



Achieving over 19% efficiency, Solaria PowerXT solar modules are one of the highest power modules in the residential solar market. Compared to conventional modules, Solaria PowerXT modules have fewer gaps between the solar cells; this leads to higher power and superior aesthetics. Solaria PowerXT residential modules are manufactured with black backsheet and frames, giving them a striking appearance.

Developed in California, Solaria's patented cell cutting and module assembly form high-density sub-strings, which are packed more efficiently and reduce inactive space between cells. By utilizing a ribbon-less interconnection process, cells are cut and overlaid without soldering, which creates highly reliable sub-string assemblies in a cost effective manner.

Higher Efficiency, Higher Power

Solaria PowerXT modules achieve over 19% efficiency; conventional modules achieve 15% – 17% efficiency. Solaria PowerXT modules are one of the highest power modules available.

Lower System Costs

Solaria PowerXT modules 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 module quadrants, which dramatically lowers the shading losses and boosts energy yield.

Improved Aesthetics

Compared to conventional modules, Solaria PowerXT modules have a more uniform appearance and superior 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 100 patents encompassing materials, processes, applications, products, manufacturing automation and equipment. Headquartered in Fremont, California, Solaria has developed a technology platform that unlocks the potential of solar energy allowing it to be ubiquitous and universally accessed.









| Performance at STC (1000W/m², 25° C, AM 1.5) | | | | | |
|---|-----|----------|---------|------------|---------|
| Solaria PowerXT- | | 320R-BX | 325R-BX | 325R-PX | 330R-PX |
| Max Power (Pmax) | [W] | 320 | 325 | 325 | 330 |
| Efficiency | [%] | 18.7 | 19.0 | 19.0 | 19.3 |
| Open Circuit Voltage (Voc) | [V] | 44.3 | 44.5 | 44.3 | 44.5 |
| Short Circuit Current (Isc) | [A] | 9.36 | 9.40 | 9.46 | 9.49 |
| Max Power Voltage (Vmp) | [V] | 36.5 | 36.7 | 36.4 | 36.6 |
| Max Power Current (Imp) | [A] | 8.77 | 8.86 | 8.93 | 9.02 |
| Power Tolerance | [%] | -0/+3 | -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] | 235 | 239 | 239 | 243 |
| Open Circuit Voltage (Voc) | [V] | 40.7 | 41.0 | 40.7 | 41.0 |
| Short Circuit Current (Isc) | [A] | 7.54 | 7.58 | 7.63 | 7.66 |
| Max Power Voltage (Vmp) | [V] | 33.2 | 33.4 | 33.1 | 33.3 |
| Max Power Current (Imp) | [A] | 7.08 | 7.16 | 7.23 | 7.30 |
| Temperature Characteristics | | | | | |
| NOCT | | [°C] | | 45 +/-2 | |
| Temp. Coeff. of Pmax | | [% / °C] | | -0.40 | |
| Temp. Coeff. of Voc | | [% / °C] | | -0.32 | |
| Temp. Coeff. of Isc | | [% / °C] | | 0.05 | |
| Design Parameters | | | | | |
| Operating temperature | | [°C] | | -40 to +85 |) |
| Max System Voltage | | [V] | | 1000 | |

[A]

[#]

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Mechanical Characteristics

| Cell Type | Monocrystalline Silicon |
|------------------------|------------------------------|
| Dimensions (L x W x H) | 1621mm x 1056mm x 40mm |
| Weight | 20 kg / 44 lbs |
| Glass Type / Thickness | AR Coated, Tempered / 3.2mm |
| Frame Type | Anodized Aluminum |
| Cable Type / Length | 12 AWG PV Wire (UL) / 1000mm |
| Connector Type | Amphenol H4 (MC4 compatible) |
| Junction Box | IP67 / 4 diodes |
| Front Load (UL 1703) | 5400 Pa / 113 psf |
| Rear Load (UL 1703) | 3600 Pa / 75 psf |
| | |

Certifications / Warranty

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

^{*} Warranty details at www.solaria.com

Packaging

| Stacking Method | Horizontal / Palletized |
|---------------------------|-------------------------|
| Pcs / Pallet | 25 |
| Pallet Dims | 1668 x 1120 x 1254 mm |
| Pallet Weight | 560 kg / 1235 lbs |
| Pallets / 40-ft Container | 28 |
| Pcs / 40-ft Container | 700 |

IV Curves vs. Irradiance (330W Module)

Max Fuse Rating

Bypass Diodes







