

Tesla Solar Panel

The Tesla Solar Panel blends sleek aesthetics and hidden electrical connections with high-powered engineering, exceeding industry performance and quality standards. Featuring our Tesla frame design, the all-black panel mounts close to your roof for a minimalist aesthetic, with no extra rails and no visible clamps.

The Tesla Solar Panel is certified to IEC / UL 61730 - 1, IEC / UL 61730 - 2 and IEC 61215 and will be certified to IEC 61701 and IEC 62716 for extreme environments.

Proudly made on Earth by humans, and assembled at Buffalo, New York in United States of America.

Sleek Design

- All-black solar panels and concealed cell connections for a uniform minimalist aesthetic.
- Seamless integration with Tesla Panel Mount - no exposed hardware, low profile, and aesthetic front and side skirts.

Power Zones

- More substrings to mitigate shade and deliver more energy to your home.
- Designed to pair perfectly with the Tesla Solar Inverter and Powerwall 3.
- 3x Power Zones compared to legacy panels for maximized energy yield.

Standard Solar Panel

6 Power Zones



Tesla Solar Panel

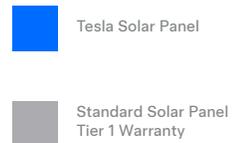
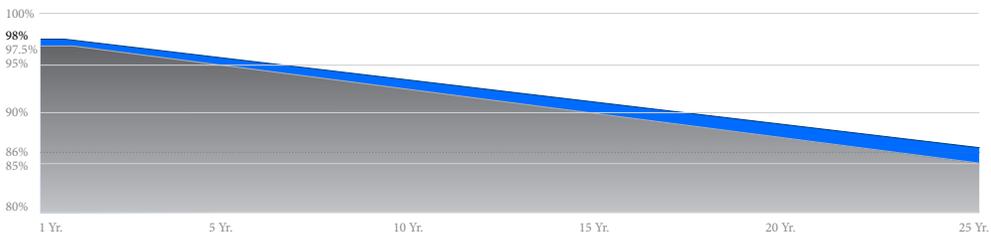
18 Power Zones



Limited Power Warranty

Product	25 years
Performance	25 years

At least 98% of nominal power during first year. Thereafter max. 0.45% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.



Solar Panel Specifications

Electrical Characteristics

Power Class	415 W	420 W
Test Method	STC	STC
Max Power, P_{max} (W)	415	420
Open Circuit Voltage, V_{oc} (V)	40.92	40.95
Short Circuit Current, I_{sc} (A)	12.93	13.03
Max Power Voltage, V_{mp} (V)	34.24	34.29
Max Power Current, I_{mp} (A)	12.12	12.25
Module Efficiency (%)	$\geq 20.3\%$	$\geq 20.5\%$
STC	1000 W/m ² , 25°C, AM1.5	

Mechanical Parameters

Cell Orientation	360 (6 x 60)
Junction Box	IP68, 3 diodes
Cable	4 mm ² 12 AWG, 1000 mm 39.4 in. Length
Connector	Staubli MC4
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass
Frame	Black Anodized Aluminum Alloy
Weight	22.3 kg 49 lb
Dimensions	1805 mm x 1135 mm x 40 mm 71.1 in x 44.7 in x 1.57 in

Operation Parameters

Operational Temperature	-40 °C up to +85°C
Power Output Tolerance	415 W: +5/-0 W 420 W: +10/-0 W
V_{oc} & I_{sc} Tolerance	+/- 5%
Max System Voltage	DC 1000V (IEC/UL)
Max Series Fuse Rating	25 A
Safety Class	Class II
Fire Rating	UL 61730 Type 2

Mechanical Loading

Front Side Test Load	4309 Pa 90 psf
Rear Side Test Load	4309 Pa 90 psf
Front Side Design Load	2873 Pa 60 psf
Rear Side Design Load	2873 Pa 60 psf
Hail Test	35mm at 27.2 m/s

Temperature Rating (STC)

Temperature Coefficient of I_{sc}	+0.04%/ °C
Temperature Coefficient of V_{oc}	-0.27%/ °C
Temperature Coefficient of P_{max} (W)	-0.34%/ °C

