

# Tesla

## Photovoltaic Module

T420S, T425S, and T430S

### Maximum Power

The Tesla module is one of the most powerful residential photovoltaic modules available. Our system requires up to 20 percent fewer modules to achieve the same power as a standard system. The module boasts a high conversion efficiency and a half-cell architecture that improves shade tolerance.

### Beautiful Solar

Featuring our proprietary Zep Groove design, the all-black module connects easily with Tesla ZS components to keep panels close to your roof and close to each other for a blended aesthetic with simple drop-in and precision quarter-turn connections.

### Reliability

Tesla modules are subject to automotive-grade engineering scrutiny and quality assurance, far exceeding industry standards. Modules are certified to IEC / UL 61730 - 1, IEC / UL 61730 - 2 and IEC / UL 61215.

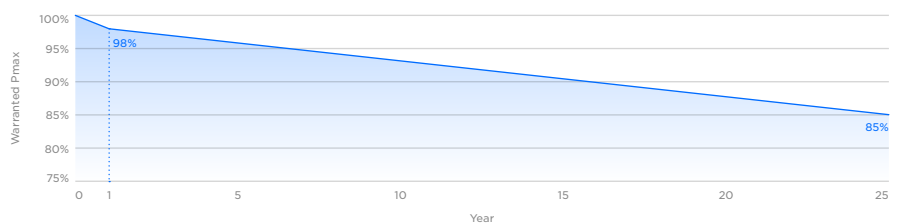


### Limited Warranty

Materials and Processing	25 years
Extra Linear Power Output	25 years

The maximum Pmax degradation is 2% in the 1st year and 0.54% annually from the 2nd to 25th year.

### Linear Power Warranty



# Module Specifications

## Electrical Characteristics

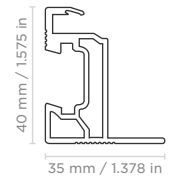
Power Class	T420S		T425S		T430S	
	STC	NOCT	STC	NOCT	STC	NOCT
Test Method	STC	NOCT	STC	NOCT	STC	NOCT
Max Power, $P_{MAX}$ (W)	420	313.7	425	317.4	430	321.1
Open Circuit Voltage, $V_{OC}$ (V)	48.5	45.47	48.65	45.61	48.8	45.75
Short Circuit Current, $I_{SC}$ (A)	11.16	9.02	11.24	9.09	11.32	9.15
Max Power Voltage, $V_{MP}$ (V)	40.90	38.08	41.05	38.22	41.20	38.36
Max Power Current, $I_{MP}$ (A)	10.27	8.24	10.36	8.3	10.44	8.37
Module Efficiency (%)	19.3		19.6		19.8	
STC	1000 W/m <sup>2</sup> , 25°C, AM1.5					
NOCT	800 W/m <sup>2</sup> , 20°C, AM1.5, wind speed 1m/s					

## Temperature Rating (STC)

Temperature Coefficient of $I_{sc}$	+0.040% / °C
Temperature Coefficient of $V_{oc}$	-0.260% / °C
Temperature Coefficient of $P_{MAX}$ (W)	-0.331% / °C

## Mechanical Loading

Front Side Design Load	3600 Pa   75 lb/ft <sup>2</sup>
Rear Side Design Load	1600 Pa   33 lb/ft <sup>2</sup>
Hailstone Test	25 mm Hailstone at 23 m/s



## Mechanical Parameters

Cell Orientation	144 (6 x 24)
Junction Box	IP68, 3 diodes
Cable	4 mm <sup>2</sup>   12 AWG, 1400 mm   55.1 in. Length
Connector	Staubli MC4 or EVO2
Glass	3.2 mm ARC Glass
Frame	Black Anodized Aluminum Alloy
Weight	25.3 kg   55.8 lb
Dimension	2094 mm x 1038 mm x 40 mm 82.4 in x 40.9 in x 1.57 in

## Operation Parameters

Operational Temperature	-40°C - +85°C
Power Output Tolerance	-0 / +5 W
$V_{oc}$ & $I_{sc}$ Tolerance	+/- 3%
Max System Voltage	DC 1000 V (IEC/UL)
Max Series Fuse Rating	20 A
NOCT	45.7 +/- 2°C
Safety Class	Class II
Fire Rating	UL Type 1 or 2

