

BENEFITS

Non-Penetrating

Easily installed solar roof tiles require no roof modifications or attachments

Lightweight

Aerodynamic, lightweight tiles are easy to ship, handle, and install

Protects Your Roof

Protects rooftops from harsh weather, UV exposure and thermal cycling

Insulated to Reduce Costs

R-10 insulation saves up to 30% more energy by reducing a building's heating and cooling load

Deploys Rapidly

Interlocking, pre-engineered solar tiles lay directly on rooftop and install quickly without mechanical fastening

Scalable Design

Modular design scales easily for small to large-scale installations



The PowerGuard™ Solar Roof Tile is a simple, high-density system for rooftop installations. Its non-penetrating modular design delivers reliable, clean electricity while insulating and protecting your roof. Flat, lightweight solar tiles operate within your existing roof line and electrical system and install rapidly and securely without mechanical fastening.

Highlights

Peak Watts / ft ² (m ²) [array]	17.02 (183)
Average Array Weight, lbs/ft ² (kg/m ²)	4 (43.05)
Wind Resistance, mph (kph)	140 (225)



Microsoft - 480 kW - Mountain View, California

About SunPower

SunPower designs, manufactures and delivers high-performance solar electric technology worldwide. Our high-efficiency solar cells generate up to 50% more power than conventional solar cells. Our high-performance solar panels, roof tiles and trackers deliver significantly more energy than competing systems.



Electrical Data		
Measured at Standard Test Conditions (STC): Irradiance 1000W/m ² , AM 1.5, and cell temperature 25° C		
Peak Power *	P _{max}	305 W (±5%)
Rated Voltage	V _{mpp}	54.7 V
Rated Current	I _{mpp}	5.58 A
Open Circuit Voltage	V _{oc}	64.2 V
Short Circuit Current	I _{sc}	5.96 A
Maximum System Voltage	UL	600 V
Temperature Coefficients	Power	-0.38% / K
	Voltage (V _{oc})	-176.6 mV / K
	Current (I _{sc})	3.5 mA / K
NOCT		45° C +/- 2° C
Series Fuse Rating		15 A

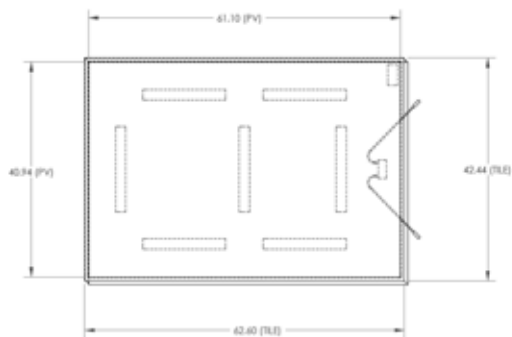
Mechanical Data	
Solar Laminate	SunPower™ 305 Solar Laminates
Solar Cells	96 all-back contact monocrystalline
Front Glass	High transmission tempered glass
Junction Box	IP-65 rated with 3 bypass diodes, 32 x 155 x 128 (mm)
Output Cables	1000 mm length cables / MultiContact (MC4) connectors
Insulating Tile Base	Base layer of insulating and interlocking extruded polystyrene, protected by a top layer of latex-modified cementitious material
Tile Weight	72 lbs (32.6 kg)
Roof Coverage	84% N-S

Tested Operating Conditions	
Temperature	-40° F to +185° F (-40° C to +85° C)
Maximum load	50 psf 245kg/m ² (2400 Pa) front and back – e.g. wind
Impact Resistance	Hail 1 in (25 mm) at 52mph (23 m/s)

Warranties and Certifications	
Warranty	25-year limited power warranty 10-year limited product warranty
Certifications	Tested to UL 1703, Class B Fire Rating
Built in the USA. Complies with the "Buy American" clause of The American Recovery and Reinvestment Act of 2009.	

* Other laminates may be available upon request

Dimensions



PowerGuard technology is protected by US Patent Numbers 5,316,592, 5,505,788, RE 38,988 and 6,061,978. Other US and/or international patents issued or pending may apply.

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
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