

## BENEFITS

### Highest Efficiency

Panel efficiency of 18.5% is higher than any commercially available panel of similar size

### More Power

Delivers up to 50% more power per unit area than conventional solar panels and 100% more than thin film solar panels

### Reduces Installation Cost

More power per panel means fewer panels per install. This saves both time and money.

### Reliable and Robust Design

Proven materials, tempered front glass, and a sturdy anodized frame allow panel to operate reliably in multiple mounting configurations



SPR-230-WHT

# 230 SOLAR PANEL

EXCEPTIONAL EFFICIENCY AND PERFORMANCE



**The SunPower 230 Solar Panel provides today's highest efficiency and performance.** Utilizing 72 next generation SunPower all-back contact solar cells and an optimized panel design, the SunPower 230 delivers an unprecedented total panel conversion efficiency of 18.5%. The 230 panel's reduced voltage-temperature coefficient and exceptional low-light performance attributes provide far higher energy delivery per peak power than conventional panels.

### SunPower's High Efficiency Advantage - Up to Twice the Power

#### Comparable systems covering 1000 m<sup>2</sup> / 10,750 ft<sup>2</sup>

	Thin Film	Conventional	SunPower
Watts / Panel	65	165	230
Efficiency	9.0%	12.0%	18.5%
kWs	90	120	185



#### Electrical Data

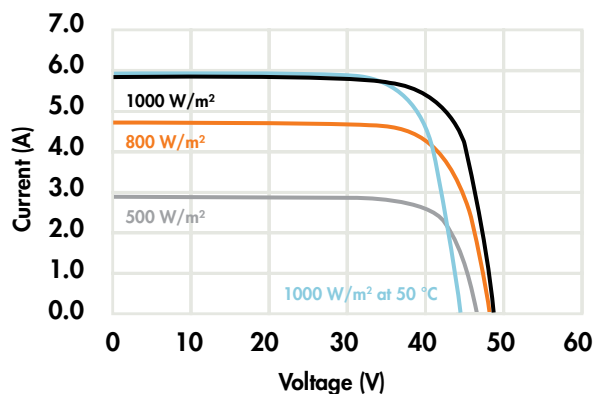
Measured at Standard Test Conditions (STC): irradiance of 1000/m<sup>2</sup>, air mass 1.5 g, and cell temperature 25° C

Peak Power (+/-5%)	Pmax	230 W
Rated Voltage	Vmp	41.0 V
Rated Current	Imp	5.61 A
Open Circuit Voltage	Voc	48.7 V
Short Circuit Current	Isc	5.99 A
Maximum System Voltage	IEC, UL	1000 V, 600 V
Temperature Coefficients		
	Power	-0.38% /°C
	Voltage (Voc)	-132.5 mV/°C
	Current (Isc)	3.5 mA/°C
Series Fuse Rating		20 A
Peak Power per Unit Area		185 W/m <sup>2</sup> , 17.2 W/ft <sup>2</sup>
CEC PTC Rating		213.5 W

#### Mechanical Data

Solar Cells	72 SunPower all-back contact monocrystalline
Front Glass	3.2mm (1/8 in) tempered
Junction Box	IP-65 rated with 3 bypass diodes
Output Cables	900 mm length / Multi-Contact connectors
Frame	Anodized aluminum alloy type 6063
Weight	15 kg, 33 lbs

#### IV Curve



Current/voltage characteristics with dependence on irradiance and module temperature.

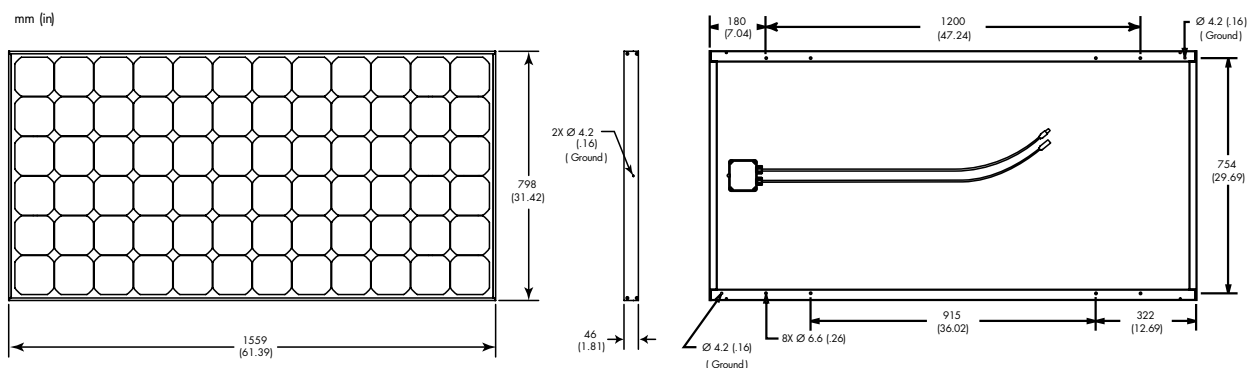
#### Tested Operating Conditions

Temperature	-40° C to +85° C (-40° F to +185° F)
Max load	50 psf (2400 Pascals) front and back
Impact Resistance	Hail - 25mm (1 in) at 23 m/s (52 mph)

#### Warranty and Certifications

Warranty	25 year limited power warranty 5 year limited product warranty
Certifications	IEC 61215 , Safety tested IEC 61730; UL listed (UL 1703), Class C Fire Rating

#### Dimensions



**CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.** Go to [www.sunpowercorp.com/panels](http://www.sunpowercorp.com/panels) for details

#### About SunPower

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