

230 SOLAR PANEL

EXCEPTIONAL EFFICIENCY AND PERFORMANCE

BENEFITS

Highest Efficiency

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

More Power

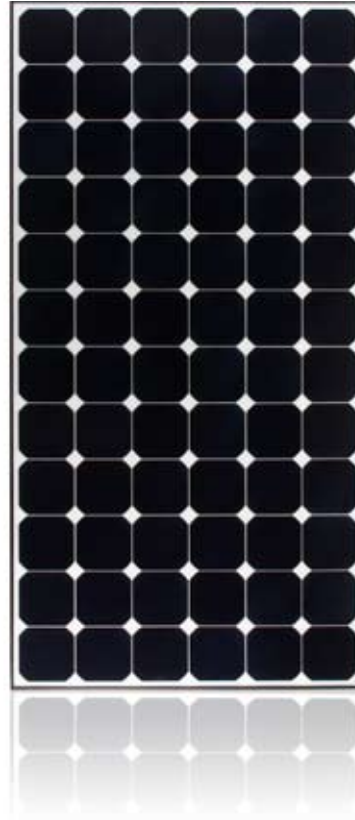
SunPower 230 delivers up to 50% more power per unit area than conventional solar panels and 100% more than thin film solar panels.

Reduced 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.



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 outstanding energy delivery per peak power watt.

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

| Comparable systems covering 1000 m ² / 10,750 ft ² | | | |
|--|-----------|--------------|----------|
| | Thin Film | Conventional | SunPower |
| Watts / Panel | 65 | 165 | 230 |
| Efficiency | 9.0% | 12.0% | 18.5% |
| kWs | 90 | 120 | 185 |

Electrical Data

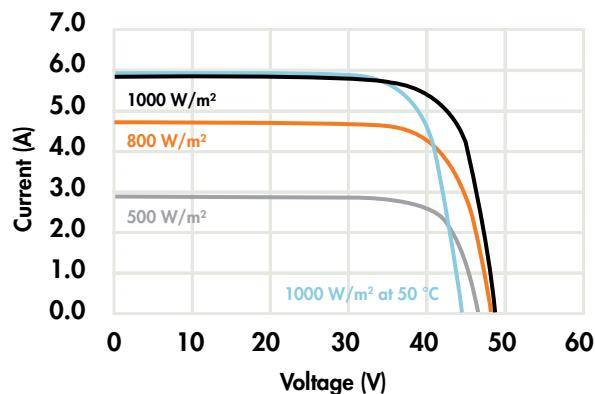
Measured at Standard Test Conditions (STC): irradiance of 1000 W/m², air mass 1.5 g, and cell temperature 25° C

| | | |
|--------------------------|---------------|---|
| 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 ² , 17.2 W/ft ² |

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.

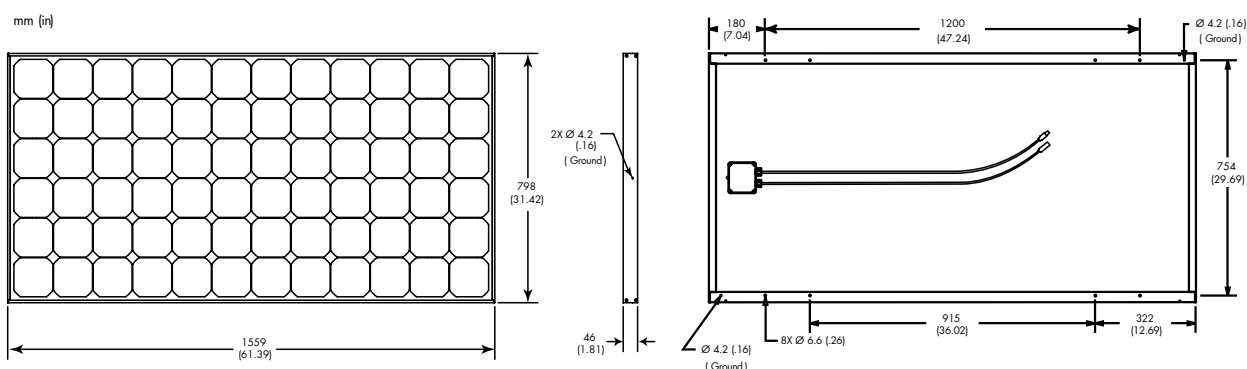
Tested Operating Conditions

| | |
|-------------------|---|
| Temperature | -40° C to +85° C (-40° F to +185° F) |
| Max load | 240 kg/m ² (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 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.