

### BENEFITS

#### Highest Efficiency

SunPower™ Solar Panels are the most efficient photovoltaic panels on the market today.

#### More Power

Our panels produce more power in the same amount of space—up to 50% more than conventional designs 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 anodised frame allow panel to operate reliably in multiple mounting configurations.

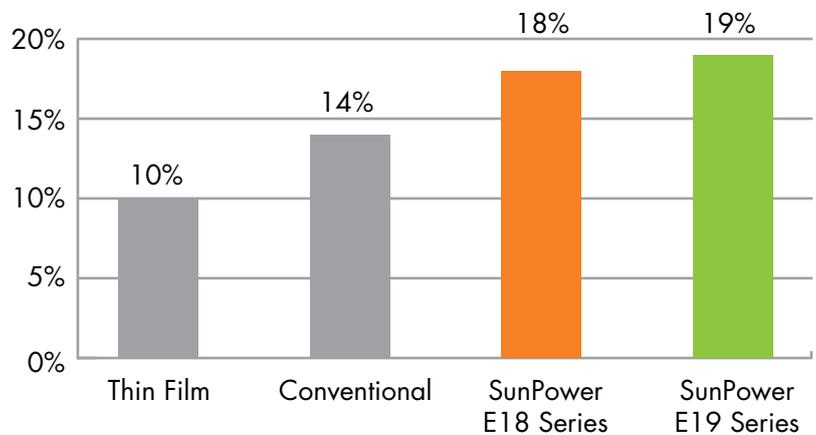


SPR-238E-WHT-D



**The SunPower™ 238 Solar Panel provides today's highest efficiency and performance.** Utilising 72 SunPower back-contact solar cells, the SunPower 238 delivers a total panel conversion efficiency of 19.1%. The panel's reduced voltage-temperature coefficient, anti-reflective glass and exceptional low-light performance attributes provide outstanding energy delivery per peak power watt.

SunPower's High Efficiency Advantage



### Electrical Data

Measured at Standard Test Conditions (STC): Irradiance 1000W/m<sup>2</sup>, AM 1.5, and cell temperature 25° C

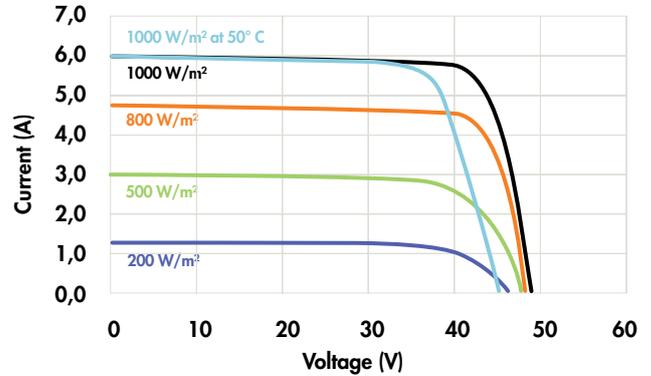
Nominal Power (+5/-3%)	P <sub>nom</sub>	238 W
Efficiency	η	19.1 %
Rated Voltage	V <sub>mpp</sub>	40.5 V
Rated Current	I <sub>mpp</sub>	5.88 A
Open Circuit Voltage	V <sub>oc</sub>	48.5 V
Short Circuit Current	I <sub>sc</sub>	6.25 A
Maximum System Voltage	IEC	1000 V
Temperature Coefficients	Power (P)	-0.38% / K
	Voltage (V <sub>oc</sub> )	-132.5mV / K
	Current (I <sub>sc</sub> )	3.5mA / K
NOCT		45° C +/-2° C
Series Fuse Rating		20 A
Limiting Reverse Current (3-strings)	I <sub>r</sub>	15.6 A

### Electrical Data

Measured at Nominal Operating Cell Temperature (NOCT): Irradiance 800W/m<sup>2</sup>, 20° C, wind 1 m/s

Nominal Power	P <sub>nom</sub>	177 W
Rated Voltage	V <sub>mpp</sub>	37.3 V
Rated Current	I <sub>mpp</sub>	4.73 A
Open Circuit Voltage	V <sub>oc</sub>	45.4 V
Short Circuit Current	I <sub>sc</sub>	5.06 A

### I-V Curve



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

### Tested Operating Conditions

Temperature	-40° C to +85° C
Max load	550 kg / m <sup>2</sup> (5400 Pa) front - e.g. snow 245 kg / m <sup>2</sup> (2400 Pa) front and back - e.g. wind
Impact Resistance	Hail – 25 mm at 23 m/s

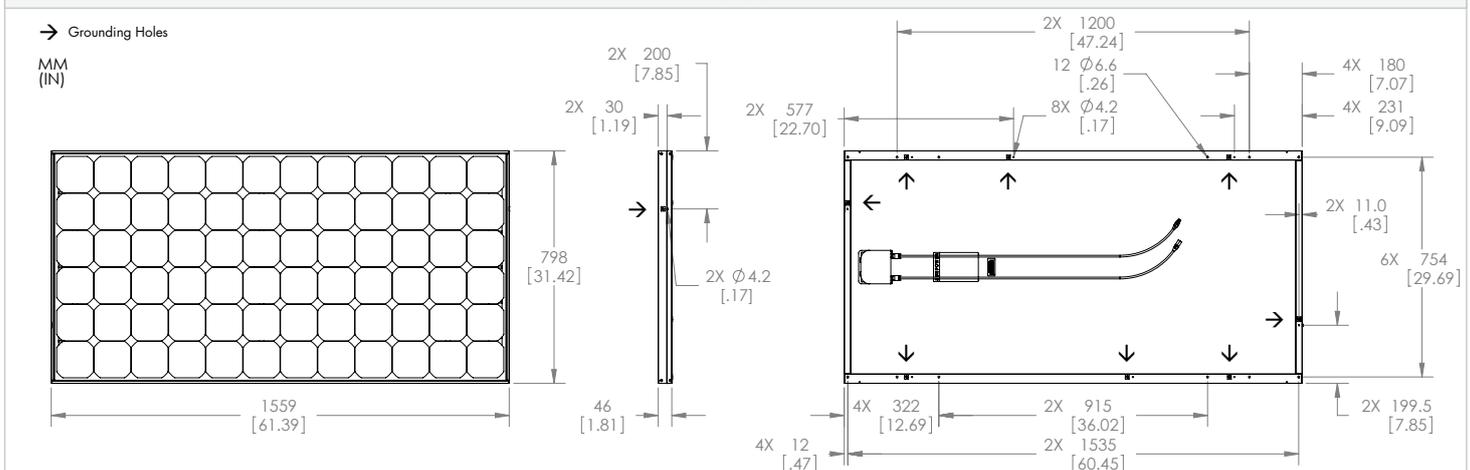
### Warranties and Certifications

Warranties	25 year limited power warranty 10 year limited product warranty
Certifications	IEC 61215 Ed. 2, IEC 61739 (SCII)

### Mechanical Data

Solar Cells	72 SunPower all-back contact monocrystalline	Output Cables	1000mm length solar cables / MultiContact (MC4) connectors
Front Glass	High transmission tempered glass with anti-reflective (AR) coating	Frame	Anodised aluminium alloy 6063 (black)
Junction Box	IP-65 rated with 3 bypass diodes 32 x 155 x 128 (mm)	Weight	15.0 kg

### Dimensions



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

Visit [sunpowercorp.com](http://sunpowercorp.com) for details