

### 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.

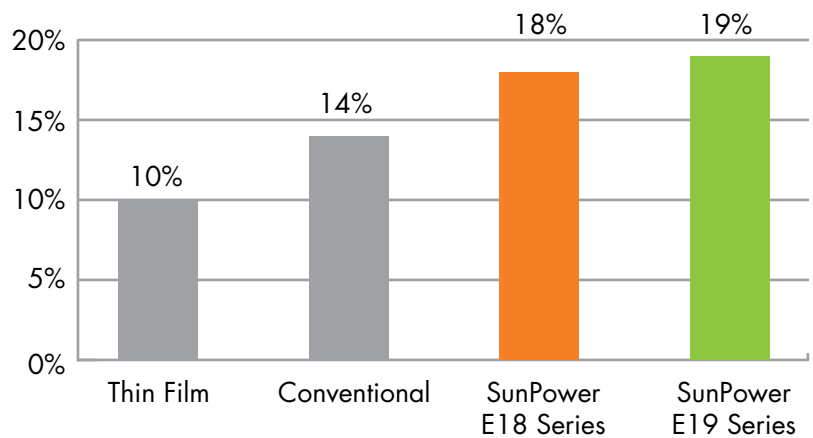


SPR-238E-WHT-D



**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

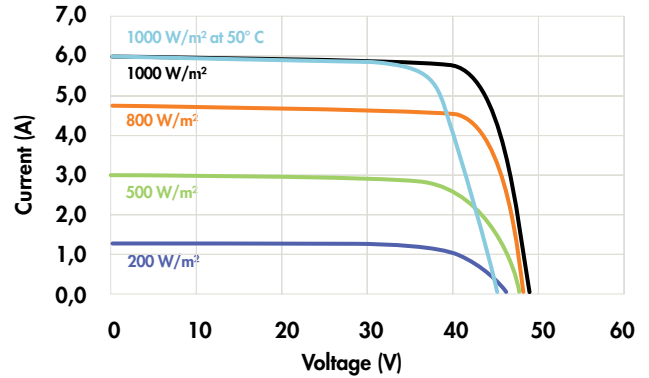
|                                      |                            |               |
|--------------------------------------|----------------------------|---------------|
| Nominal Power (+5/-3%)               | P <sub>nom</sub>           | 238 W         |
| Efficiency                           | η                          | 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<br>245 kg / m <sup>2</sup> (2400 Pa) front and back - e.g. wind |
| Impact Resistance | Hail – 25 mm at 23 m/s  |

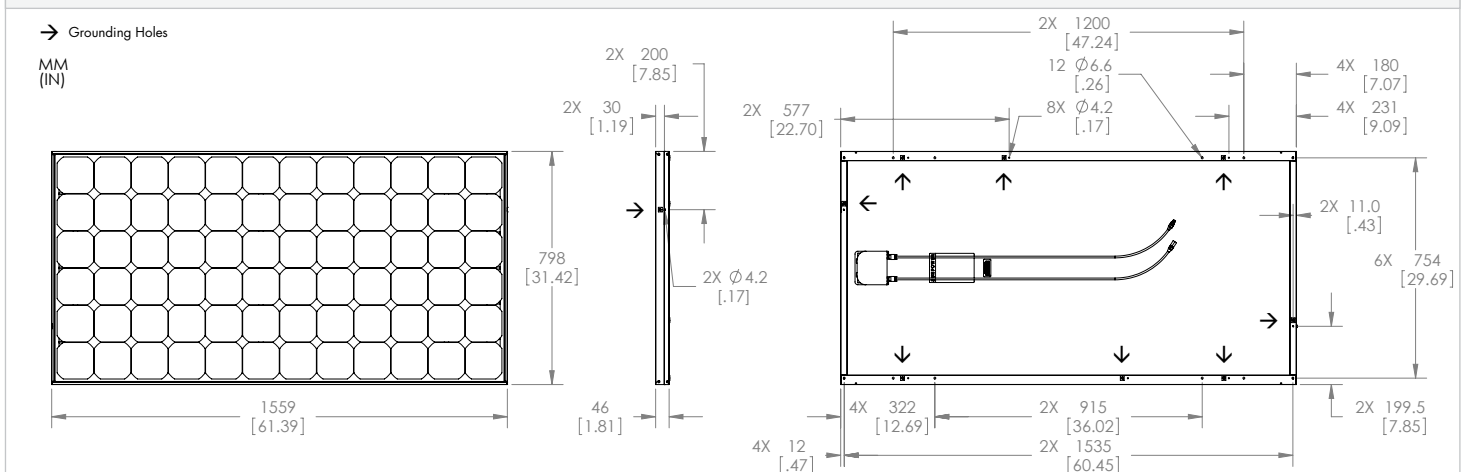
### Warranties and Certifications

|                |  |
|----------------|--|
| Warranties     | 25 year limited power warranty<br>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<br>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