

Q CELLS Q-POWER SOLAR PANEL



Hanwha Q CELLS is the largest solar cell manufacturer in the world. The Q CELLS brand is well known for solar modules, system solutions and complete power plants. All components are engineered in Germany, delivering outstanding quality. Q CELLS' Q.ANTUM technology enables panels to convert more sunlight into electricity, resulting in higher yields.

Q-Power Solar Panel

Warranty: 12 years

Cell Type: Polycrystalline

Output: 270 W

Country of manufacture: China

The newly released Q.POWER-G5 solar panel is a safe, reliable, and flexible option for Australian households. Featuring 6-busbar cells, the Q.POWER-G5 produces more electricity than standard solar panels with a similar surface area, at a lower cost. Its high-tech aluminium alloy frame and certified protection in harsh environments allow it to remain efficient in all weather conditions. It's a great option for households wanting a value panel from a premium manufacturer.

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Q.POWER-G5 260-280

POLYCRYSTALLINE SOLAR MODULE

The new **Q.POWER-G5** is the result of the continued evolution of our polycrystalline solar modules. Thanks to improved power yield, excellent reliability, and high-level operational safety, the new **Q.POWER-G5** generates electricity at a low cost (LCOE) and is suitable for a wide range of applications.



LOW LEVELIZED COST OF ELECTRICITY

Higher yield per surface area and lower BOS costs and higher power classes and an efficiency rate of up to 17.4%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



MAXIMUM COST REDUCTIONS

Lower logistics costs due to higher module capacity per box.



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty¹.



¹ See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings



Ground-mounted solar power plants



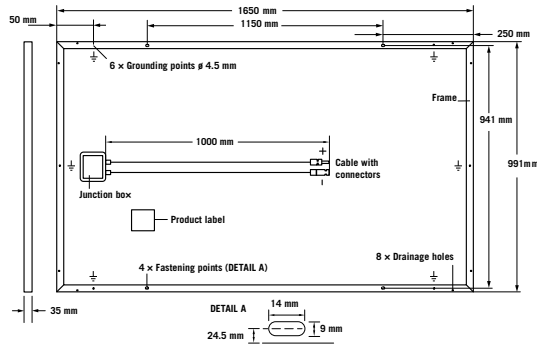
Rooftop arrays on commercial/industrial buildings

Engineered in **Germany**

Q CELLS

MECHANICAL SPECIFICATION

| | |
|---------------------|--|
| Format | 1650mm × 991mm × 35mm (including frame) |
| Weight | 18kg ± 5% |
| Front Cover | 3.2mm thermally pre-stressed glass with anti-reflection technology |
| Back Cover | Multi-layer composite sheet |
| Frame | Anodised aluminium |
| Cell | 6 × 10 polycrystalline solar cells |
| Junction box | Protection class IP67, with bypass diodes |
| Cable | 4mm ² Solar cable; (+) ≥ 1000mm, (-) ≥ 1000mm |
| Connector | Intermateable connector with H4, MC4 |

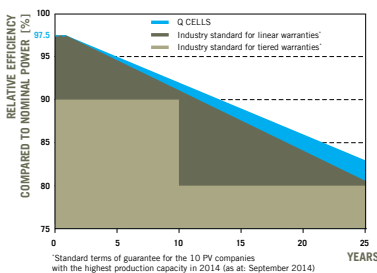


ELECTRICAL CHARACTERISTICS

| POWER CLASS | | | 260 | 265 | 270 | 275 | 280 |
|---|---------------------------------|----------------------------|-------|-------|-------|-------|-------|
| MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5W / -0W) | | | | | | | |
| Minimum | Power at MPP² | P_{MPP} [W] | 260 | 265 | 270 | 275 | 280 |
| | Short Circuit Current* | I_{SC} [A] | 9.05 | 9.20 | 9.23 | 9.27 | 9.29 |
| | Open Circuit Voltage* | V_{OC} [V] | 37.7 | 38.0 | 38.1 | 38.3 | 38.5 |
| | Current at MPP* | I_{MPP} [A] | 8.45 | 8.58 | 8.69 | 8.79 | 8.87 |
| | Voltage at MPP* | V_{MPP} [V] | 30.8 | 30.9 | 31.1 | 31.3 | 31.6 |
| | Efficiency² | η [%] | ≥15.9 | ≥16.2 | ≥16.5 | ≥16.8 | ≥17.1 |
| MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC³ | | | | | | | |
| Minimum | Power at MPP² | P_{MPP} [W] | 191 | 195 | 199 | 202 | 206 |
| | Short Circuit Current* | I_{SC} [A] | 7.32 | 7.44 | 7.47 | 7.50 | 7.51 |
| | Open Circuit Voltage* | V_{OC} [V] | 35.4 | 35.6 | 35.7 | 35.9 | 36.1 |
| | Current at MPP* | I_{MPP} [A] | 6.75 | 6.86 | 6.95 | 7.02 | 7.09 |
| | Voltage at MPP* | V_{MPP} [V] | 28.3 | 28.4 | 28.6 | 28.8 | 29.1 |

¹1000W/m², 25°C, spectrum AM 1.5G ²Measurement tolerances STC ±3%; NOC ±5% ³800W/m², NOCT, spectrum AM 1.5G * typical values, actual values may differ

Q CELLS PERFORMANCE WARRANTY



At least 97.5% of nominal power during first year. Thereafter max. 0.7% degradation per year.

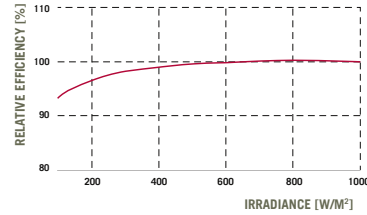
At least 90.5% of nominal power up to 10 years.

At least 82% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

*Standard terms of guarantee for the 10 PV companies with the highest production capacity in 2014 (as at: September 2014)

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000W/m²).

TEMPERATURE COEFFICIENTS

| | | | | | |
|---|----------------|-------|--|------------------|-------|
| Temperature Coefficient of I_{SC} | α [%/K] | +0.05 | Temperature Coefficient of V_{OC} | β [%/K] | -0.31 |
| Temperature Coefficient of P_{MPP} | γ [%/K] | -0.40 | Normal Operating Cell Temperature | NOCT [°C] | 45 |

PROPERTIES FOR SYSTEM DESIGN

| | | | | |
|---|----------------------------|-----------|--|-------------------|
| Maximum System Voltage | V_{SYS} [V] | 1000 | Safety Class | II |
| Maximum Reverse Current | I_r [A] | 20 | Fire Rating | C |
| Wind/Snow Load (Test-load in accordance with IEC 61215) | [Pa] | 4000/5400 | Permitted Module Temperature On Continuous Duty | -40°C up to +85°C |

QUALIFICATIONS AND CERTIFICATES

IEC 61215, IEC 61730, Conformity to CE, Application Class A



PARTNER

NOTE: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

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Engineered in Germany

Q CELLS