

Q.PRO-G3 250-270

POLYCRYSTALLINE SOLAR MODULE

The new **Q.PRO-G3** is the reliable evergreen for all applications. The third module generation from Q CELLS has been optimised across the board: improved output yield, higher operating reliability and durability, quicker installation and more intelligent design.

INNOVATIVE ALL-WEATHER TECHNOLOGY

- Maximum yields with excellent low-light and temperature behaviour.
- Increased efficiency due to world record-holding cell concept Q.ANTUM.

ENDURING HIGH PERFORMANCE

- Long-term Yield Security due to Anti PID Technology¹, Hot-Spot Protect, and Traceable Quality Tra.Q™.
- Long-term stability due to VDE Quality Tested – the strictest test program.

SAFE ELECTRONICS

- Protection against short circuits and thermally induced power losses due to breathable junction box and welded cables.
- Increased flexibility due to MC4-inter-mateable connectors.

PROFIT-INCREASING GLASS TECHNOLOGY

- Reduction of light reflection by 50%, plus long-term corrosion resistance due to high-quality »Sol-Gel roller coating« processing.

LIGHTWEIGHT QUALITY FRAME

- Stability at wind loads of up to 5400 Pa with a module weight of just 19 kg due to slim frame design with high-tech alloy.

MAXIMUM COST REDUCTIONS

- Up to 31% lower logistics costs due to higher module capacity per box.

EXTENDED WARRANTIES

- Investment security due to 12-year product warranty and 25-year linear performance warranty².



THE IDEAL SOLUTION FOR:



Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plant



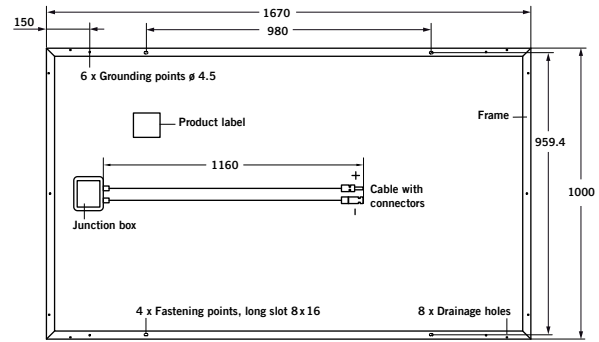
Rooftop arrays on residential buildings

¹ APT test conditions: Cells at -1000V against grounded, with conductive metal foil covered module surface, 25°C, 168h

² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	1670 mm x 1000 mm x 35 mm (including frame)
Weight	19 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodised aluminium
Cell	6 x 10 polycrystalline solar cells
Junction box	110 mm x 115 mm x 23 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 1160 mm, (-) ≥ 1160 mm
Connector	SOLARLOK PV4, IP68



ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m², 25 °C, AM 1.5 G SPECTRUM)¹

NOMINAL POWER (+5 W/-0 W)	[W]	250	255	260	265	270
Average Power	P_{MPP} [W]	252.5	257.5	262.5	267.5	272.5
Short Circuit Current	I_{SC} [A]	8.71	8.90	9.09	9.28	9.47
Open Circuit Voltage	V_{OC} [V]	37.49	37.83	38.18	38.52	38.86
Current at P_{MPP}	I_{MPP} [A]	8.21	8.37	8.53	8.69	8.85
Voltage at P_{MPP}	V_{MPP} [V]	30.76	30.77	30.78	30.79	30.80
Efficiency (Nominal Power)	η [%]	≥ 15.0	≥ 15.3	≥ 15.6	≥ 15.9	≥ 16.2

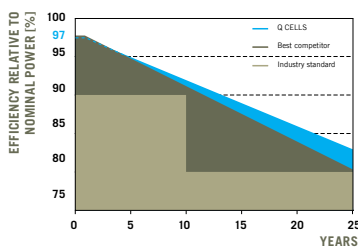
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ± 3 °C, AM 1.5 G SPECTRUM)²

NOMINAL POWER (+5 W/-0 W)	[W]	250	255	260	265	270
Average Power	P_{MPP} [W]	186.0	189.7	193.4	197.1	200.8
Short Circuit Current	I_{SC} [A]	7.03	7.18	7.33	7.48	7.63
Open Circuit Voltage	V_{OC} [V]	34.90	35.22	35.54	35.86	36.18
Current at P_{MPP}	I_{MPP} [A]	6.44	6.56	6.68	6.80	6.93
Voltage at P_{MPP}	V_{MPP} [V]	28.89	28.92	28.94	28.97	28.99

¹ Measurement tolerances STC: ± 3% (P_{MPP}); ± 10% (I_{SC} , V_{OC} , I_{MPP} , V_{MPP})

² Measurement tolerances NOCT: ± 5% (P_{MPP}); ± 10% (I_{SC} , V_{OC} , I_{MPP} , V_{MPP})

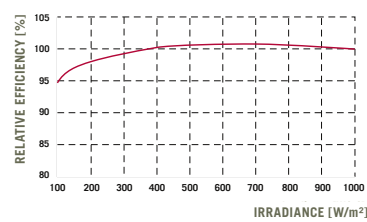
Q CELLS PERFORMANCE WARRANTY



At least 97% of nominal power during first year. Thereafter max. 0.6% degradation per year.
At least 92% of nominal power after 10 years.
At least 83% of nominal power after 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.

PERFORMANCE AT LOW IRRADIANCE



The typical change in module efficiency at an irradiance of 200 W/m² in relation to 1000 W/m² (both at 25 °C and AM 1.5 G spectrum) is -2% (relative).

TEMPERATURE COEFFICIENTS (AT 1000 W/M², 25 °C, AM 1.5 G SPECTRUM)

Temperature Coefficient of I_{SC}	α	[%/K]	+ 0.04	Temperature Coefficient of V_{OC}	β	[%/K]	- 0.30
Temperature Coefficient of P_{MPP}	γ	[%/K]	- 0.42				

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 (in accordance with IEC 61215)	[Pa]	5400	Permitted module temperature on continuous duty	-40 °C up to +85 °C

QUALIFICATIONS AND CERTIFICATES

VDE Quality Tested, IEC 61215 (Ed. 2); IEC 61730 (Ed. 1), Application class A
This data sheet complies with DIN EN 50380.



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.

Hanwha Q CELLS GmbH
Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | TEL +49 (0)3494 66 99-23444 | FAX +49 (0)3494 66 99-23000 | EMAIL sales@q-cells.com | WEB www.q-cells.com

Engineered in Germany

