powered by Q.ANTUM

Q.PLUS-G3 270-280

Q.ANTUM SOLAR MODULE

The new high-performance module Q.PLUS-G3 is the ideal solution for all applications thanks to its innovative cell technology Q.ANTUM. The world-record cell design was developed to achieve the best performance under real conditions - even with low radiation intensity and on clear, hot summer days. Q.PLUS-G3 is distinguished by optimal output yield, operating reliability and durability, as well as a more intelligent design and quick installation.

INNOVATIVE ALL-WEATHER TECHNOLOGY

- Maximum yields with excellent low-light and temperature behaviour.
- World-record cell concept Q.ANTUM.

ENDURING HIGH PERFORMANCE

- Long-term Yield Security due to Anti PID Technology[1], 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.proof.

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 warranty[2].

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2014

Q CELLS YIELD SECURITY
- ANTI PID TECHNOLOGY (APT)
- HOT-SPOT PROTECT (HSP)
- TRACEABLE QUALITY (TRA.Q™)

VDE Quality Tested
- high reliability
- low degradation
- frequent product surveillance

ID. 40032587

Photon Q CELLS Best polycrystalline solar module 2013 Q.PRO-G2 235 151 modules tested

THE IDEAL SOLUTION FOR:

Rooftop arrays on commercial/industrial buildings

Ground-mounted solar power plants

Rooftop arrays on residential buildings

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

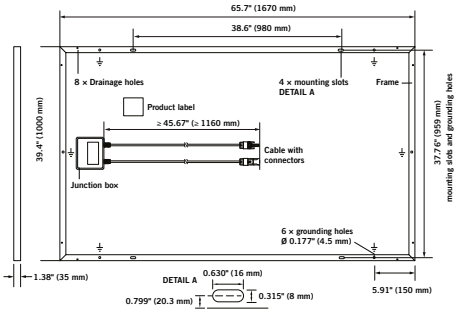
[2] See data sheet on rear for further information.

Engineered in **Germany**

Q CELLS

MECHANICAL SPECIFICATION

Format	65.7 in × 39.4 in x 1.38 in (including frame) (1670 mm × 1000 mm × 35 mm)
Weight	41.89 lb (19.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodized aluminum
Cell	6 × 10 Q.ANTUM cells
Junction box	4.33 in × 4.53 in × 0.9 in (110 mm × 115 mm × 23 mm), Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥45.67 in (1160 mm), (-) ≥45.67 in (1160 mm)
Connector	SOLARLOK PV4, IP68

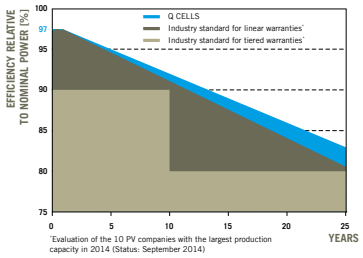


ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m², 25 °C, AM 1.5G SPECTRUM)[1]					
NOMINAL POWER (+5 W/-0 W)		**[W]**	**270**	**275**	**280**
Average Power	P_{MPP}	**[W]**	272.5	277.5	282.5
Short Circuit Current	I_{SC}	**[A]**	9.48	9.55	9.62
Open Circuit Voltage	V_{OC}	**[V]**	38.86	39.14	39.41
Current at P_{MPP}	I_{MPP}	**[A]**	8.85	8.93	9.00
Voltage at P_{MPP}	V_{MPP}	**[V]**	30.78	31.08	31.38
Efficiency (Nominal Power)	η	**[%]**	≥ 16.2	≥ 16.5	≥ 16.8
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ±3 °C. AM 1.5G SPECTRUM)[2]					
NOMINAL POWER (+5 W/-0 W)		**[W]**	**270**	**275**	**280**
Average Power	P_{MPP}	**[W]**	201.2	204.9	208.6
Short Circuit Current	I_{SC}	**[A]**	7.64	7.70	7.76
Open Circuit Voltage	V_{OC}	**[V]**	36.27	36.52	36.78
Current at P_{MPP}	I_{MPP}	**[A]**	6.93	6.99	7.05
Voltage at P_{MPP}	V_{MPP}	**[V]**	29.03	29.31	29.59

[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})

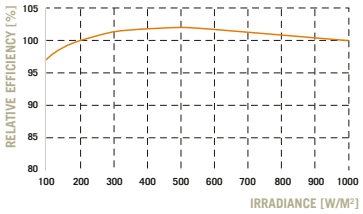
Q CELLS PERFORMANCE WARRANTY



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 1.5G spectrum) is -0 % (relative).

TEMPERATURE COEFFICIENTS (AT 1000 W/M², 25 °C, AM 1.5G SPECTRUM)							
Temperature Coefficient of I_{SC}	α	**[%/K]**	+0.04	**Temperature Coefficient of V_{OC}**	β	**[%/K]**	−0.29
Temperature Coefficient of P_{MPP}	γ	**[%/K]**	−0.41	**NOCT**		**[°F]**	116 ± 5.4 (45 ± 3 °C) (113 ± 5.4 °F)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	**[V]**	1000 (IEC) / 600 (UL)	**Safety Class**		II
Maximum Series Fuse Rating	**[A DC]**	20	**Fire Rating**		C
Max Load (UL)[2]	**[lbs/ft²]**	75 (3600 Pa)	**Permitted module temperature on continuous duty**		-40 °F up to +185 °F (-40 °C up to +85 °C)
Load Rating (UL)[2]	**[lbs/ft²]**	75 (3600 Pa)	[2] see installation manual		

QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant;
IEC 61215 (Ed.2); IEC 61730 (Ed.1) application class A

C Certified US
UL 1703
(254141)

PACKAGING INFORMATION

Number of Modules per Pallet	29
Number of Pallets per 53' Container	32
Number of Pallets per 40' Container	26
Pallet Dimensions (L × W × H)	68.5 in × 44.5 in × 46.0 in (1740 × 1130 × 1170 mm³)
Pallet Weight	1323 lb (600 kg)

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**

Specifications subject to technical changes © **Hanwha Q CELLS GmbH** Q.PLUS-G3_2014-11_Rev02_NA