powered by Q.ANTUM

Q.PEAK-G4.1 290-305

Q.ANTUM SOLAR MODULE

The new high-performance module Q.PEAK-G4.1 is the ideal solution for residential buildings 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.ANTUM TECHNOLOGY: 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 18.6 %.

INNOVATIVE ALL-WEATHER TECHNOLOGY

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

ENDURING HIGH PERFORMANCE

Long-term yield security with Anti-PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING

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

MAXIMUM COST REDUCTIONS

Up to 10 % lower logistics costs due to higher module capacity per box.

A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty[2].

EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2016

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 2014
Q.PRO-G2 235
174 modules tested

[1] APT test conditions: Cells at -1500 V against grounded, with conductive metal foil covered module surface, 25 °C, 168 h

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

THE IDEAL SOLUTION FOR:

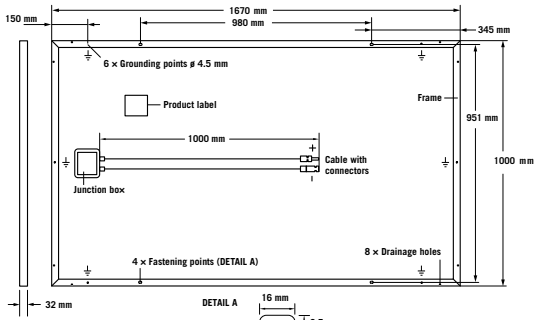
Rooftop arrays on residential buildings

Engineered in **Germany**

Q CELLS

MECHANICAL SPECIFICATION

Format	1670 mm × 1000 mm × 32 mm (including frame)
Weight	18.8 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 10 monocrystalline Q.ANTUM solar cells
Junction box	66-77 mm × 111-90 mm × 15-19 mm Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) 1000 mm, (-) 1000 mm
Connector	Genuine Multi-Contact MC4, IP68

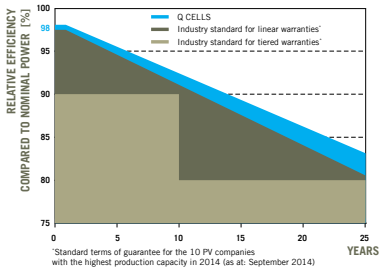


ELECTRICAL CHARACTERISTICS

POWER CLASS				290	295	300	305
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / -0 W)							
Minimum	Power at MPP[2]	P_{MPP}	[W]	290	295	300	305
	Short Circuit Current*	I_{SC}	[A]	9.63	9.70	9.77	9.84
	Open Circuit Voltage*	V_{OC}	[V]	39.19	39.48	39.76	40.05
	Current at MPP*	I_{MPP}	[A]	9.07	9.17	9.26	9.35
	Voltage at MPP*	V_{MPP}	[V]	31.96	32.19	32.41	32.62
	Efficiency[2]	η	[%]	≥ 17.4	≥ 17.7	≥ 18.0	≥ 18.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC[3]							
Minimum	Power at MPP[2]	P_{MPP}	[W]	214.4	218.1	221.8	225.5
	Short Circuit Current*	I_{SC}	[A]	7.77	7.82	7.88	7.94
	Open Circuit Voltage*	V_{OC}	[V]	36.65	36.92	37.19	37.46
	Current at MPP*	I_{MPP}	[A]	7.12	7.20	7.27	7.35
	Voltage at MPP*	V_{MPP}	[V]	30.12	30.30	30.49	30.67

[1] 1000 W/m², 25 °C, spectrum AM 1.5 G [2] Measurement tolerances STC ±3 %; NOC ±5 % [3] 800 W/m², NOCT, spectrum AM 1.5 G * typical values, actual values may differ

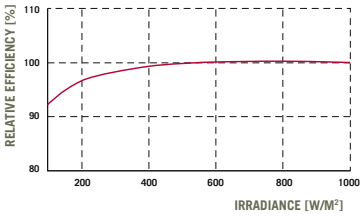
Q CELLS PERFORMANCE WARRANTY



At least 98 % of nominal power during first year. Thereafter max. 0.6 % degradation per year.
At least 92.6 % of nominal power up to 10 years.
At least 83.6 % 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.

PERFORMANCE AT LOW IRRADIANCE



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

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	**Temperature Coefficient of V_{OC}**	β	[%/K]	−0.28
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.39	**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

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.

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Engineered in **Germany**