powered by Q.ANTUM

Q.PEAK-G4.1 290-310

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 18.9 %.

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 LID Technology, 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].

VDE 11/2016 Quality Tested – high reliability, low degradation, optimized durability, continous line monitoring – www.VDEinfo.com ID. 40032587

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

EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2017 2018

[1] APT test conditions according to IEC/TS 62804-1:2015, method B (–1500 V, 168 h)

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

THE IDEAL SOLUTION FOR:

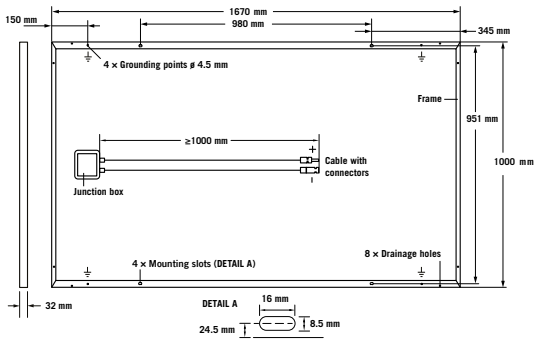
Rooftop arrays on residential buildings

Engineered in **Germany**

Q CELLS

MECHANICAL SPECIFICATION

Format	1670 mm × 1000 mm × 32 mm (including frame)
Weight	18.5 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 × 90-115 mm × 15-20 mm, Protection class ≥ IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) 1000 mm, (–) 1000 mm
Connector	Multi-Contact MC4, IP68

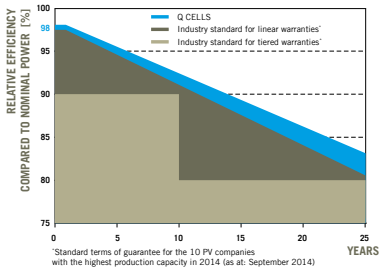


ELECTRICAL CHARACTERISTICS

POWER CLASS				290	295	300	305	310
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / –0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	290	295	300	305	310
	Short Circuit Current[1]	I_{SC}	[A]	9.63	9.70	9.77	9.84	9.91
	Open Circuit Voltage[1]	V_{OC}	[V]	39.19	39.48	39.76	40.05	40.33
	Current at MPP	I_{MPP}	[A]	9.07	9.17	9.26	9.35	9.44
	Voltage at MPP	V_{MPP}	[V]	31.96	32.19	32.41	32.62	32.83
	Efficiency[1]	η	[%]	≥ 17.4	≥ 17.7	≥ 18.0	≥ 18.3	≥ 18.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	216.4	220.1	223.9	227.6	231.3
	Short Circuit Current	I_{SC}	[A]	7.76	7.82	7.87	7.93	7.99
	Open Circuit Voltage	V_{OC}	[V]	36.87	37.14	37.41	37.68	37.95
	Current at MPP	I_{MPP}	[A]	7.12	7.20	7.28	7.35	7.43
	Voltage at MPP	V_{MPP}	[V]	30.39	30.58	30.76	30.94	31.12

[1]Measurement tolerances P_{MPP} ±3 %; I_{SC}; V_{OC} ±5 % at STC: 1000 W/m², 25±2 °C, AM 1.5 G according to IEC 60904-3 · [2]800 W/m², NMOT, spectrum AM 1.5 G

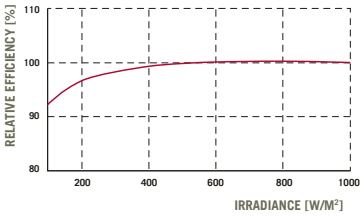
Q CELLS PERFORMANCE WARRANTY



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 Module Operating Temperature**	NMOT	[°C]	43±3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS}	[V]	1000	**Safety Class**	II
Maximum Reverse Current	I_R	[A]	20	**Fire Rating**	C
Max. Design Load, Push / Pull		[Pa]	3600/2667	**Permitted Module Temperature on Continuous Duty**	–40 °C up to +85 °C
Max. Test Load, Push / Pull		[Pa]	5400/4000		

QUALIFICATIONS AND CERTIFICATES

VDE Quality Tested, IEC 61215:2016; IEC 61730:2016, Application class A
This data sheet complies with DIN EN 50380.

PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 40' High Cube Container	26
Number of Modules per 40' High Cube Container	832

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.

Made in Korea

Hanwha Q CELLS Australia Pty Ltd
1402, 20 Berry St., North Sydney NSW 2060, Australia | **TEL** +61 (0) 2 9016 3033 | **FAX** +61 (0) 2 9016 3032 | **EMAIL** q-cells-australia@q-cells.com | **WEB** www.q-cells.com.au

Engineered in **Germany**