

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 Technology¹, 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 warranty².



www.VDEinfo.com
ID. 40032587

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

² See data sheet on rear for further information.

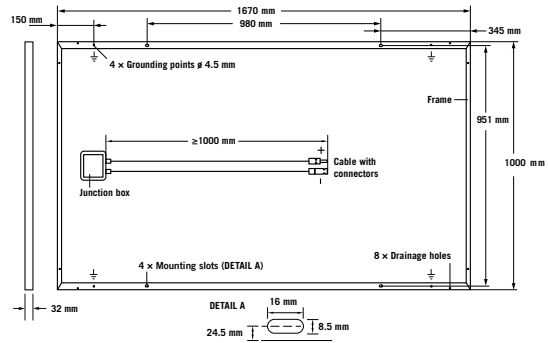
THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings

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 mm ² Solar cable; (+) 1000 mm, (-) 1000 mm
Connector	Multi-Contact MC4, IP68

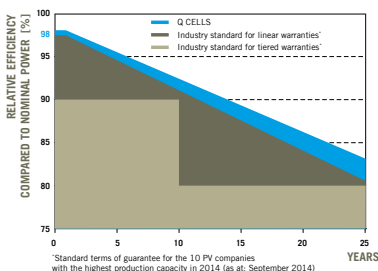


ELECTRICAL CHARACTERISTICS

POWER CLASS			290	295	300	305	310
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5W / -0W)							
Minimum	Power at MPP¹	P_{MPP} [W]	290	295	300	305	310
	Short Circuit Current¹	I_{SC} [A]	9.63	9.70	9.77	9.84	9.91
	Open Circuit Voltage¹	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
	Efficiency¹	η [%]	≥ 17.4	≥ 17.7	≥ 18.0	≥ 18.3	≥ 18.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²							
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

¹Measurement tolerances P_{MPP} ± 3%; I_{SC}, V_{OC} ± 5% at STC: 1000W/m², 25 ± 2°C, AM 1.5G according to IEC 60904-3 - ²800W/m², NMOT, spectrum AM 1.5G

Q CELLS PERFORMANCE WARRANTY

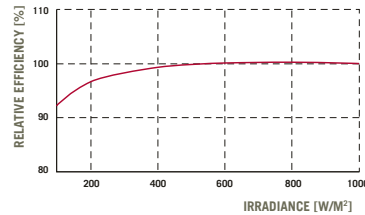


At least 98% of nominal power during first year. Thereafter max. 0.6% degradation per year.
At least 92.6% of nominal power up to 10 years.
At least 83.6% of nominal power up to 25 years.

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

¹Standard 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]	+0.04	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.



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