

Q.PEAK-G4.1 295-305

Q.ANTUM ULTRA 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 Ultra**. 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 ULTRA 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 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.



THE IDEAL SOLUTION FOR:



Rooftop arrays on
residential buildings

Engineered in **Germany**

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

² See data sheet on rear for further information.

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	Multi-Contact MC4 or MC4 intermateable, IP68			

ELECTRICAL CHARACTERISTICS					
POWER CLASS		295	300	305	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5 W / -0 W)					
Minimum	Power at MPP²	P _{MPP}	295	300	305
	Short Circuit Current*	I _{sc}	9.70	9.77	9.84
	Open Circuit Voltage*	V _{OC}	39.48	39.76	40.05
	Current at MPP*	I _{MPP}	9.17	9.26	9.35
	Voltage at MPP*	V _{MPP}	32.19	32.41	32.62
	Efficiency²	η	≥ 17.7	≥ 18.0	≥ 18.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC³					
Minimum	Power at MPP²	P _{MPP}	218.1	221.8	225.5
	Short Circuit Current*	I _{sc}	7.82	7.88	7.94
	Open Circuit Voltage*	V _{OC}	36.92	37.19	37.46
	Current at MPP*	I _{MPP}	7.20	7.27	7.35
	Voltage at MPP*	V _{MPP}	30.30	30.49	30.67

¹1000 W/m², 25°C, spectrum AM 1.5G

²Measurement tolerances STC ± 3%; NOC ± 5%

³800 W/m², NOCT, spectrum AM 1.5G

* typical values, actual values may differ

Q CELLS PERFORMANCE WARRANTY		PERFORMANCE AT LOW IRRADIANCE	
	At least 97 % of nominal power during first year. Thereafter max. 0.6% degradation per year. At least 92 % of nominal power up to 10 years. At least 83 % 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. *Standard terms of guarantee for the 10 PV companies with the highest production capacity in 2014 (as at: September 2014)		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 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		PARTNER	
VDE Quality Tested, IEC 61215 (Ed.2); IEC 61730 (Ed.1), Application class A This data sheet complies with DIN EN 50380.			

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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