

powered by



Q.PLUS BFR-G4.1 275-285

Q.ANTUM SOLAR MODULE

The new high-performance module Q.PLUS BFR-G4.1 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.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 17.4 %.



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.



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

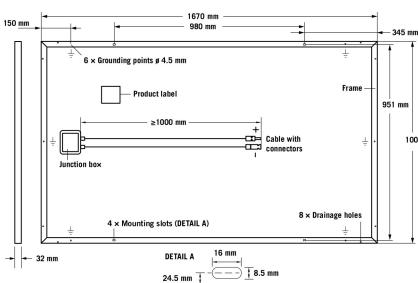
² See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



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 Q.ANTUM solar cells
Junction box	66-77 mm × 115-90 mm × 15-19 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) 1000 mm, (-) 1000 mm
Connector	Multi-Contact, MC4, IP65 and IP68

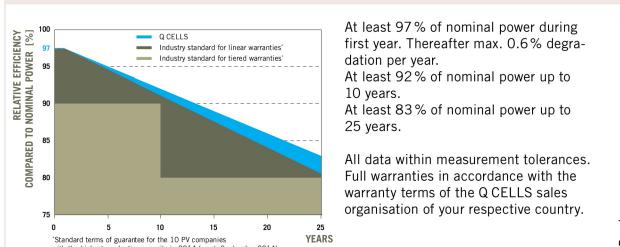


ELECTRICAL CHARACTERISTICS

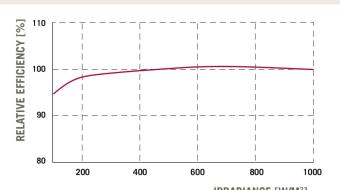
	POWER CLASS	275	280	285
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5W / -0W)				
Power at MPP²	P _{MPP} [W]	275	280	285
Short Circuit Current*	I _{SC} [A]	9.35	9.41	9.46
Open Circuit Voltage*	V _{OC} [V]	38.72	38.97	39.22
Current at MPP*	I _{MPP} [A]	8.77	8.84	8.91
Voltage at MPP*	V _{MPP} [V]	31.36	31.67	31.99
Efficiency²	η [%]	≥ 16.5	≥ 16.8	≥ 17.1
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC ³				
Power at MPP²	P _{MPP} [W]	203.3	207.0	210.7
Short Circuit Current*	I _{SC} [A]	7.54	7.58	7.63
Open Circuit Voltage*	V _{OC} [V]	36.13	36.37	36.61
Current at MPP*	I _{MPP} [A]	6.87	6.93	6.99
Voltage at MPP*	V _{MPP} [V]	29.59	29.87	30.15

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

Q CELLS PERFORMANCE WARRANTY



PERFORMANCE AT LOW IRRADIANCE



TEMPERATURE COEFFICIENTS

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]	-0.40	Normal Operating Cell Temperature NOCT	45 °C	

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	[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

Specifications subject to technical changes © Hanwha Q CELLS Q.PLUS BFR-G4.1-275-285_2017-05_Rev02_EN

Engineered in Germany

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