

powered by

Q.ANTUM

Q.PLUS-G4.3 280-290

ENDURING HIGH
PERFORMANCE



Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 17.7%.



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 aluminum alloy frame, tested to the extreme in Australia for Australian Conditions at James Cook University Cyclone Testing Station.



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 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



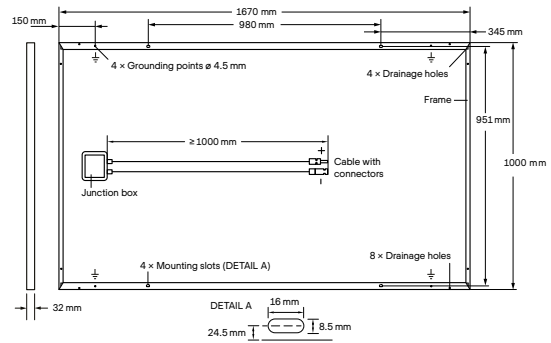
Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants

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	Anodised aluminium
Cell	6 × 10 Q.ANTUM solar cells
Junction box	85-115 mm × 60-80 mm × 15-20 mm Protection class ≥ IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 1000 mm, (-) ≥ 1000 mm
Connector	Stäubli MC4; IP68

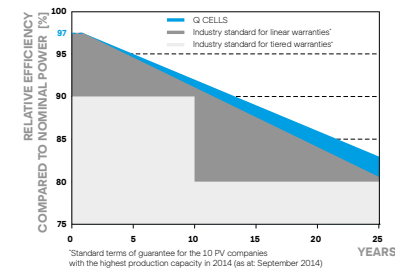


ELECTRICAL CHARACTERISTICS

POWER CLASS		280	285	290	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)					
Minimum	Power at MPP ¹	P_{MPP} [W]	280	285	290
	Short Circuit Current ¹	I_{SC} [A]	9.41	9.46	9.52
	Open Circuit Voltage ¹	V_{OC} [V]	38.97	39.22	39.48
	Current at MPP	I_{MPP} [A]	8.84	8.91	8.98
	Voltage at MPP	V_{MPP} [V]	31.67	31.99	32.29
	Efficiency ¹	η [%]	≥ 16.8	≥ 17.1	≥ 17.4
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²					
Minimum	Power at MPP	P_{MPP} [W]	209.2	213.0	216.7
	Short Circuit Current	I_{SC} [A]	7.58	7.63	7.67
	Open Circuit Voltage	V_{OC} [V]	36.66	36.90	37.14
	Current at MPP	I_{MPP} [A]	6.93	6.99	7.05
	Voltage at MPP	V_{MPP} [V]	30.18	30.46	30.73

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

Q CELLS PERFORMANCE WARRANTY

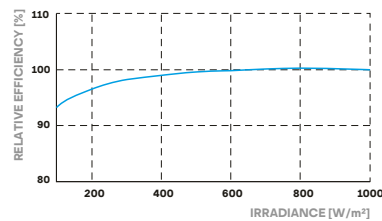


At least 97% of nominal power during first year. Thereafter max. 0.6% degradation per year. At least 92% of nominal power up to 10 years. At least 83% of nominal power up to 25 years.

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

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, 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 - +85°C
Max. Test Load, Push/Pull	[Pa]	5400/4000		

QUALIFICATIONS AND CERTIFICATES

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



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per Trailer (24t)	30
Number of Pallets per 40' HC-Container (26t)	26
Pallet Dimensions (L × W × H)	1745 × 1150 × 1170 mm
Pallet Weight	651 kg

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 Malaysia

Hanwha Q CELLS Australia Pty Ltd

Suite 1, Level 1, 15 Blue Street, 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