

Q.PRO BFR-G4 255-265

POLYCRYSTALLINE SOLAR MODULE

The new Q.PRO BFR-G4 is the result of the continued evolution of our Q.PRO family. Thanks to improved power yield, excellent reliability, and high-level operational safety, the new Q.PRO BFR-G4 generates electricity at a low cost (LCOE) and is suitable for a wide range of applications.



LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area and lower BOS costs thanks to higher power classes and an efficiency rate of up to 16.2 %.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti-PID Technology¹, Hot-Spot-Protect and Traceable Quality Tra.Q™.



LIGHT-WEIGHT QUALITY FRAME

High-tech aluminum 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.



SAFE ELECTRONICS

Protection against short circuits and thermally induced power losses due to breathable junction box and welded cables.



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance guarantee².



THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings



Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants

Engineered in **Germany**

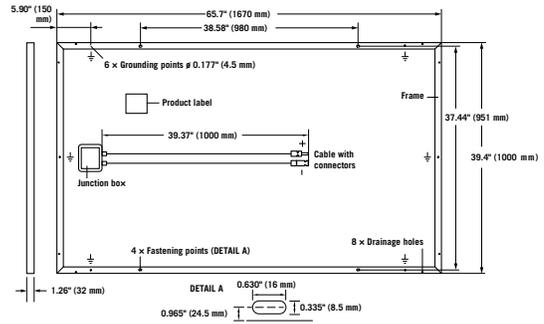
Q CELLS

¹ APT test conditions: Cells at -1000V against grounded, with conductive metal foil covered module surface, 25 °C, 168h

² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	65.7 in × 39.4 in × 1.26 in (including frame) (1670 mm × 1000 mm × 32 mm)
Weight	41.45 lb (18.8 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 10 polycrystalline solar cells
Junction box	4.33 in × 4.53 in × 0.9 in (110 mm × 115 mm × 23 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 39.37 in (1000 mm), (-) ≥ 39.37 in (1000 mm)
Connector	Tyco Solarlok PV4, IP68

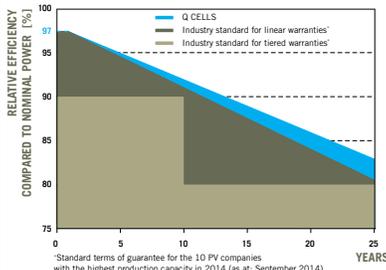


ELECTRICAL CHARACTERISTICS

POWER CLASS		255	260	265	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5W /- 0W)					
Minimum	Power at MPP²	P_{MPP} [W]	255	260	265
	Short Circuit Current*	I_{SC} [A]	9.07	9.15	9.23
	Open Circuit Voltage*	V_{OC} [V]	37.54	37.77	38.01
	Current at MPP*	I_{MPP} [A]	8.45	8.53	8.62
	Voltage at MPP*	V_{MPP} [V]	30.18	30.46	30.75
	Efficiency²	η [%]	≥ 15.3	≥ 15.6	≥ 15.9
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC³					
Minimum	Power at MPP²	P_{MPP} [W]	188.3	192.0	195.7
	Short Circuit Current*	I_{SC} [A]	7.31	7.38	7.44
	Open Circuit Voltage*	V_{OC} [V]	34.95	35.16	35.38
	Current at MPP*	I_{MPP} [A]	6.61	6.68	6.75
	Voltage at MPP*	V_{MPP} [V]	28.48	28.75	29.01

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

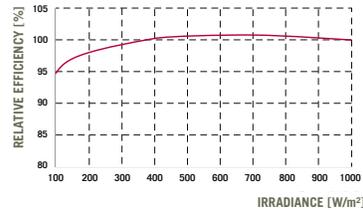


At least 97% of nominal power during first year. Thereafter max. 0.6% degradation per year.
At least 92% of nominal power after 10 years.
At least 83% of nominal power after 25 years.

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



The typical change in module efficiency at an irradiance of 200 W/m² in relation to 1000 W/m² (both at 25 °C and AM 1.5G spectrum) is -2% (relative).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.30
Temperature Coefficient of P_{MPP}	γ [%/K]	-0.41	Normal Operating Cell Temperature	NOCT [°F]	113 ± 5.4 (45 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{sys}	[V]	1000 (IEC) / 1000 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C / TYPE 1
Max Load (UL)²	[lbs/ft ²]	75 (3600 Pa)	Permitted module temperature on continuous duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Load Rating (UL)²	[lbs/ft ²]	55.6 (2666 Pa)	² see installation manual	

QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant;
IEC 61215 (Ed.2); IEC 61730 (Ed.1) application class A



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 53' Container	32
Number of Pallets per 40' Container	26
Pallet Dimensions (L × W × H)	68.7 in × 45.0 in × 46.0 in (1745 × 1145 × 1170 mm)
Pallet Weight	1435 lb (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.

Hanwha Q CELLS USA Corp.
300 Spectrum Center Drive, Suite 1250, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | WEB www.q-cells.com

Engineered in Germany

