

Q.PRO BFR-G3 245-260

POLYCRYSTALLINE SOLAR MODULE

The new **Q.PRO BFR-G3** is the reliable evergreen for all applications, with a black frame design for improved aesthetics. The third module generation from Q CELLS has been optimised across the board: improved output yield, higher operating reliability and durability, quicker installation and more intelligent design.

INNOVATIVE ALL-WEATHER TECHNOLOGY

- Maximum yields with excellent low-light and temperature behaviour.
- Certified fully resistant to level 5 salt fog

ENDURING HIGH PERFORMANCE

- Long-term Yield Security due to Anti PID Technology¹, Hot-Spot Protect, and Traceable Quality Tra.Q™.
- Long-term stability due to VDE Quality Tested – the strictest test program.

SAFE ELECTRONICS

- Protection against short circuits and thermally induced power losses due to breathable junction box and welded cables.
- Increased flexibility due to MC4-inter-mateable connectors.

PROFIT-INCREASING GLASS TECHNOLOGY

- Reduction of light reflection by 50 %, plus long-term corrosion resistance due to high-quality
- Sol-Gel roller coating processing.

LIGHTWEIGHT QUALITY FRAME

- Stability at wind loads of up to 5400 Pa with a module weight of just 19 kg due to slim frame design with high-tech alloy.

MAXIMUM COST REDUCTIONS

- Up to 31 % lower logistics costs due to higher module capacity per box.

EXTENDED WARRANTIES

- Investment security due to 12-year product warranty and 25-year linear performance warranty².



THE IDEAL SOLUTION FOR:



Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants



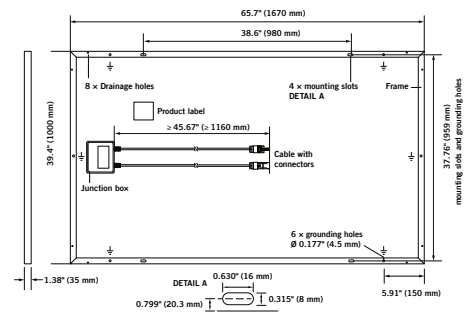
Rooftop arrays on residential buildings

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 × 1.38 in (including frame) (1670 mm × 1000 mm × 35 mm)
Weight	41.89 lb (19.0 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	Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 45.67 in (1160 mm), (-) ≥ 45.67 in (1160 mm)
Connector	SOLARLOK PV4, IP68



ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m², 25 °C, AM 1.5 G SPECTRUM)¹

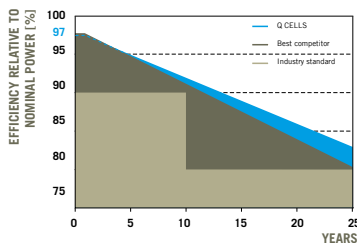
NOMINAL POWER (+5 W/-0 W)		[W]	245	250	255	260
Average Power	P_{MPP}	[W]	247.5	252.5	257.5	262.5
Short Circuit Current	I_{SC}	[A]	8.52	8.71	8.90	9.09
Open Circuit Voltage	V_{OC}	[V]	37.15	37.49	37.83	38.18
Current at P_{MPP}	I_{MPP}	[A]	8.05	8.21	8.37	8.53
Voltage at P_{MPP}	V_{MPP}	[V]	30.75	30.76	30.77	30.78
Efficiency (Nominal Power)	η	[%]	14.7	≥ 15.0	≥ 15.3	≥ 15.6

PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ± 3 °C, AM 1.5 G SPECTRUM)²

NOMINAL POWER (+5 W/-0 W)		[W]	245	250	255	260
Average Power	P_{MPP}	[W]	182.4	186.0	189.7	193.4
Short Circuit Current	I_{SC}	[A]	6.87	7.03	7.18	7.33
Open Circuit Voltage	V_{OC}	[V]	34.58	34.90	35.22	35.54
Current at P_{MPP}	I_{MPP}	[A]	6.32	6.44	6.56	6.68
Voltage at P_{MPP}	V_{MPP}	[V]	28.86	28.89	28.92	28.94

¹ Measurement tolerances STC: ± 3% (P_{MPP}); ± 10% (I_{SC} , V_{OC} , I_{MPP} , V_{MPP})

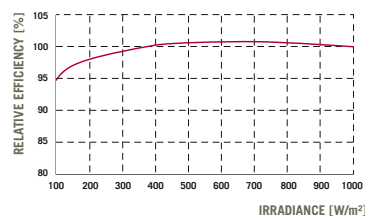
Q CELLS PERFORMANCE WARRANTY



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.

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 1.5 G spectrum) is -2% (relative).

TEMPERATURE COEFFICIENTS (AT 1000 W/M², 25 °C, AM 1.5 G SPECTRUM)

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]	-0.42				

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 (in accordance with IEC 61215)	[Pa]	5400	Permitted module temperature on continuous duty	-40 °F up to 185 °F (-40 °C up to 85 °C)

QUALIFICATIONS AND CERTIFICATES

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



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.

Hanwha Q CELLS USA Corp.

8001 Irvine Center Drive, suite 1250, Irvine CA 92618, USA | TEL +1 848 748 59 96 | FAX +1 949 748 59 84 | EMAIL q-cells-usa@q-cells.com | WEB www.q-cells.us

Engineered in Germany

