

Q CELLS
YIELD SECURITY

- ✓ ANTI PID TECHNOLOGY (APT)
- ✓ HOT-SPOT PROTECT (HSP)
- ✓ TRACEABLE QUALITY (TRA.Q™)

VDE
Quality Tested

of high reliability
of low degradation
of frequent product surveillance

ID 40032987

Photon
YIELD SECURITY
Module

Q CELLS
Best polycrystalline solar module 2013
Q.PRO-G2 235
151 modules tested

POLYCRYSTALLINE SOLAR MODULE DATA SHEET

Q.PRO BFR-G3 245-260

Versatility. Safety.

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-intermateable 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

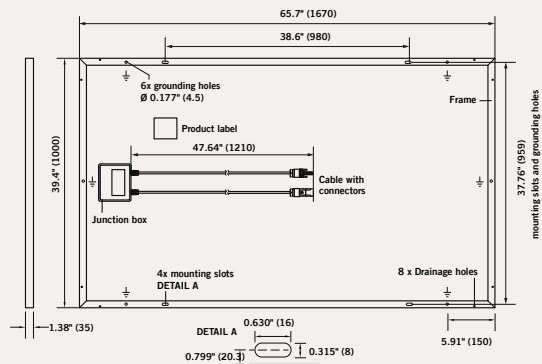
- Investment security due to **12-year product warranty** and **25-year linear performance warranty**².



¹ APT test conditions: Cells at -1000 V 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	65.7 in x 39.4 in x 1.38 in (including frame) (1670 mm x 1000 mm x 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 x 10 polycrystalline solar cells
Junction box	Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) 47.64 in (1210 mm), (-) 47.64 in (1210 mm)
Connector	SOLARLOK PV4, IP68



ELECTRICAL CHARACTERISTICS

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

		[W]	245	250	255	260
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

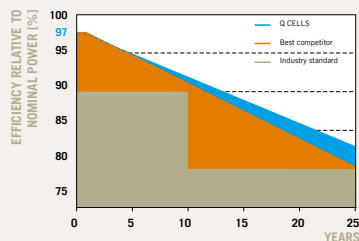
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ± 3 °C, AM 1.5 G SPECTRUM)²

		[W]	245	250	255	260
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]	34.36	34.68	34.99	35.31
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})

² Measurement tolerances NOCT: ± 5% (P_{MPP}); ± 10% (I_{SC}, V_{OC}, I_{MPP}, V_{MPP})

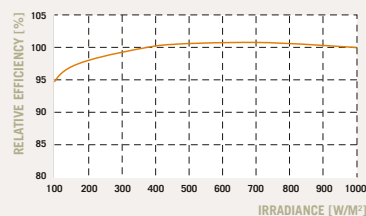
Q CELLS PERFORMANCE WARRANTY



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]	-0.33
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



PACKAGING INFORMATION

Modules per pallet	28
Pallets per 40' container	26
Modules per 40' container	728

NOTES: Metric units are definitive. Installation instructions must be followed. See the installation and operating manual or contact technical service for further information on approved installation and use of this product.

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