



Reviewed for Code Compliance  
Inspections Division  
Approved with Conditions

Date: 05/17/16

# Q.PRO BFR-G3 255-265

## 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 Technology<sup>1</sup>, 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 warranty<sup>2</sup>.



### THE IDEAL SOLUTION FOR:



Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants



Rooftop arrays on residential buildings

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

<sup>2</sup> See data sheet on rear for further information.

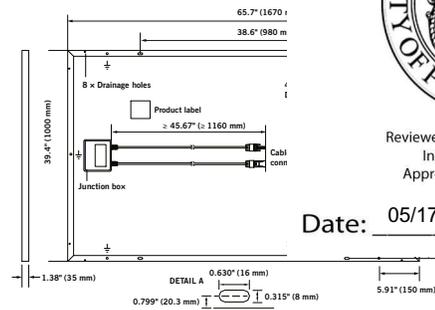


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## MECHANICAL SPECIFICATION

<b>Format</b>	65.7 in x 39.4 in x 1.38 in (including frame) (1670 mm x 1000 mm x 35 mm)
<b>Weight</b>	41.89 lb (19.0 kg)
<b>Front Cover</b>	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
<b>Back Cover</b>	Composite film
<b>Frame</b>	Black anodized aluminum
<b>Cell</b>	6 x 10 polycrystalline solar cells
<b>Junction box</b>	Protection class IP67, with bypass diodes
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) ≥ 45.67 in (1160 mm), (-) ≥ 45.67 in (1160 mm)
<b>Connector</b>	SOLARLOK PV4, IP68



## ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m<sup>2</sup>, 25°C, AM 1.5 G SPECTRUM)<sup>1</sup>

NOMINAL POWER (+5 W/-0 W)	[W]	255	260	265
<b>Average Power</b>	$P_{MPP}$ [W]	257.5	262.5	267.5
<b>Short Circuit Current</b>	$I_{SC}$ [A]	8.90	9.09	9.28
<b>Open Circuit Voltage</b>	$V_{OC}$ [V]	37.83	38.18	38.52
<b>Current at <math>P_{MPP}</math></b>	$I_{MPP}$ [A]	8.37	8.53	8.69
<b>Voltage at <math>P_{MPP}</math></b>	$V_{MPP}$ [V]	30.77	30.78	30.79
<b>Efficiency (Nominal Power)</b>	$\eta$ [%]	≥ 15.3	≥ 15.6	≥ 15.9

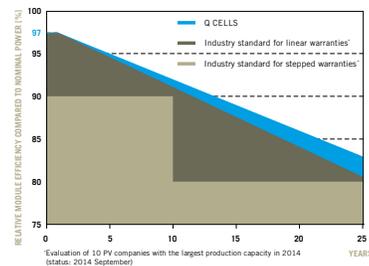
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m<sup>2</sup>, 45 ± 3°C, AM 1.5 G SPECTRUM)<sup>2</sup>

NOMINAL POWER (+5 W/-0 W)	[W]	255	260	265
<b>Average Power</b>	$P_{MPP}$ [W]	189.7	193.4	197.1
<b>Short Circuit Current</b>	$I_{SC}$ [A]	7.18	7.33	7.48
<b>Open Circuit Voltage</b>	$V_{OC}$ [V]	35.22	35.54	35.86
<b>Current at <math>P_{MPP}</math></b>	$I_{MPP}$ [A]	6.56	6.68	6.80
<b>Voltage at <math>P_{MPP}</math></b>	$V_{MPP}$ [V]	28.92	28.94	28.97

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

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

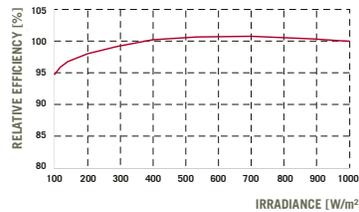
## Q CELLS PERFORMANCE WARRANTY



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/m<sup>2</sup> in relation to 1000 W/m<sup>2</sup> (both at 25°C and AM 1.5 G spectrum) is -2% (relative).

## TEMPERATURE COEFFICIENTS (AT 1000 W/M<sup>2</sup>, 25°C, AM 1.5 G SPECTRUM)

<b>Temperature Coefficient of <math>I_{SC}</math></b>	$\alpha$ [%/K]	+0.04	<b>Temperature Coefficient of <math>V_{OC}</math></b>	$\beta$ [%/K]	-0.30
<b>Temperature Coefficient of <math>P_{MPP}</math></b>	$\gamma$ [%/K]	-0.42	<b>NOCT</b>	[°F]	113 ± 5.4 (45 ± 3°C)

## PROPERTIES FOR SYSTEM DESIGN

<b>Maximum System Voltage <math>V_{SYS}</math></b>	[V]	1000 (IEC) / 600 (UL)	<b>Safety Class</b>	II
<b>Maximum Series Fuse Rating</b>	[A DC]	20	<b>Fire Rating</b>	C
<b>Max Load (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	75 (3600 Pa)	<b>Permitted module temperature on continuous duty</b>	-40°F up to +185°F (-40°C up to +85°C)
<b>Load Rating (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	75 (3600 Pa)	<sup>2</sup> 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

<b>Number of Modules per Pallet</b>	29
<b>Number of Pallets per 53' Container</b>	32
<b>Number of Pallets per 40' Container</b>	26
<b>Pallet Dimensions (L x W x H)</b>	68.5 in x 44.5 in x 46.0 in (1740 x 1130 x 1170 mm)
<b>Pallet Weight</b>	1323 lb (600 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.

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Engineered in Germany



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