

# Q.PRO L-G2 305-315

## POLYCRYSTALLINE SOLAR MODULE

The polycrystalline solar module **Q.PRO L-G2** with power classes up to 315 W is the strongest module of its type on the market globally. Powered by 72 Q CELLS solar cells and with a size of 1.9 m<sup>2</sup> **Q.PRO L-G2** was specially designed for large solar power plants to reduce BOS costs. But there is even more to our polycrystalline modules. Only Q CELLS offers German engineering quality with our unique triple Yield Security.

### YOUR EXCLUSIVE TRIPLE YIELD SECURITY

- Anti PID Technology (APT) reliably prevents power loss resulting from unwanted leakage currents (potential-induced degradation)<sup>1</sup>.
- Hot-Spot Protect (HSP) prevents yield losses and reliably protects against module fire.
- Traceable Quality (Tra.Q™) is the 'Finger Print' of a solar cell. Tra.Q™ ensures continuous quality control throughout the entire production process from cells to modules while making Q CELLS solar modules forgery proof.

### ONE MORE ADVANTAGE FOR YOU

- Reduced BOS costs: Optimised design to reduce costs per Wp.
- Improved energy yield: The actual output of all Q CELLS solar modules is up to 5 Wp higher than the nominal power thanks to positive sorting.
- Guaranteed performance: investment security due to 12-year product warranty and 25-year linear performance warranty<sup>2</sup>.



### THE IDEAL SOLUTION FOR:



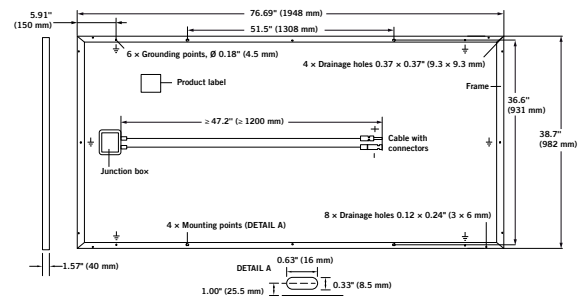
Ground-mounted  
solar power plants

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

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

## MECHANICAL SPECIFICATION

<b>Format</b>	76.69 in × 38.7 in × 1.57 in (including frame) (1948 mm × 982 mm × 40 mm)
<b>Weight</b>	48.72 lbs (22.1 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>	Anodised aluminium
<b>Cell</b>	6 × 12 polycrystalline solar cells
<b>Junction box</b>	4.33 in × 4.53 in × 0.91 in (110 mm × 115 mm × 23 mm) Protection class IP67, with bypass diodes
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) ≥ 47.2 in (1200 mm), (-) ≥ 47.2 in (1200 mm)
<b>Connector</b>	Tyco, Solarlok PV4, IP68



## ELECTRICAL CHARACTERISTICS

POWER CLASS		305	310	315	
<b>MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC<sup>1</sup> (POWER TOLERANCE +5 W / -0 W)</b>					
Minimum	<b>Power at MPP<sup>2</sup></b>	<b>P<sub>MPP</sub></b> [W]	305	310	315
	<b>Short Circuit Current*</b>	<b>I<sub>SC</sub></b> [A]	8.99	9.06	9.12
	<b>Open Circuit Voltage*</b>	<b>V<sub>OC</sub></b> [V]	45.14	45.37	45.61
	<b>Current at MPP*</b>	<b>I<sub>MPP</sub></b> [A]	8.38	8.45	8.52
	<b>Voltage at MPP*</b>	<b>V<sub>MPP</sub></b> [V]	36.39	36.68	36.97
	<b>Efficiency<sup>2</sup></b>	<b>η</b> [%]	≥ 15.9	≥ 16.2	≥ 16.5
<b>MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC<sup>3</sup></b>					
Minimum	<b>Power at MPP<sup>2</sup></b>	<b>P<sub>MPP</sub></b> [W]	225.3	228.9	232.6
	<b>Short Circuit Current*</b>	<b>I<sub>SC</sub></b> [A]	7.25	7.30	7.36
	<b>Open Circuit Voltage*</b>	<b>V<sub>OC</sub></b> [V]	42.02	42.24	42.46
	<b>Current at MPP*</b>	<b>I<sub>MPP</sub></b> [A]	6.56	6.61	6.67
	<b>Voltage at MPP*</b>	<b>V<sub>MPP</sub></b> [V]	34.35	34.62	34.88

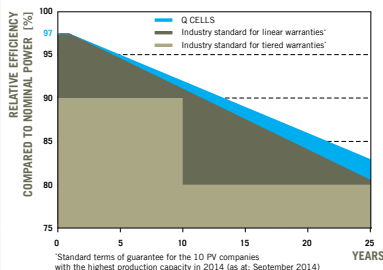
<sup>1</sup> 1000 W/m<sup>2</sup>, 25°C, spectrum AM 1.5G

<sup>2</sup> Measurement tolerances STC ± 3%; NOC ± 5%

<sup>3</sup> 800 W/m<sup>2</sup>, NOCT, spectrum AM 1.5G

\* typical values, actual values may differ

### Q CELLS PERFORMANCE WARRANTY

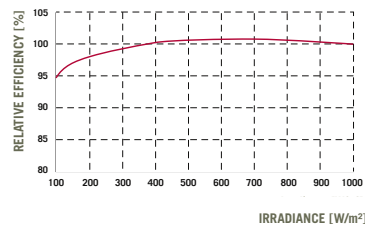


At least 97% of nominal power during first year. Thereafter max. 0.6% degradation per year.  
At least 92% of nominal power after 10 years.  
At least 83% of nominal power after 25 years.

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

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

### TEMPERATURE COEFFICIENTS

<b>Temperature Coefficient of I<sub>SC</sub></b>	<b>α</b> [%/K]	+0.04	<b>Temperature Coefficient of V<sub>OC</sub></b>	<b>β</b> [%/K]	-0.30
<b>Temperature Coefficient of P<sub>MPP</sub></b>	<b>γ</b> [%/K]	-0.41	<b>Normal Operating Cell Temperature</b>	<b>NOCT</b> [°F]	113 ± 5.4 (45 ± 3°C)

### PROPERTIES FOR SYSTEM DESIGN

<b>Maximum System Voltage V<sub>SYS</sub></b>	[V]	1000 (IEC) / 1000 (UL)	<b>Safety Class</b>	II
<b>Maximum Series Fuse Rating</b>	[A DC]	20	<b>Fire Rating</b>	C / Type 1
<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> ]	55.6 (2666 Pa)	<sup>2</sup> see installation manual	

### QUALIFICATIONS AND CERTIFICATES

UL 1703; IEC 61215 (Ed. 2); IEC 61730 (Ed. 1), Application class A  
This data sheet complies with DIN EN 50380.



### PACKAGING INFORMATION

<b>Number of Modules per Pallet</b>	24
<b>Number of Pallets per 53' Container</b>	30
<b>Number of Pallets per 40' Container</b>	22
<b>Pallet Dimensions (L × W × H)</b>	79.1 in × 43.3 in × 46.1 in (2010 × 1100 × 1170 mm)
<b>Pallet Weight</b>	1301 lbs (590 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

