

## **POLYCRYSTALLINE SOLAR MODULE**

# Q.PRO-G2 240-255 Reliability and safety

The **Q.PRO-G2** solar module with power classes up to 255 Wp is one of the strongest 60-cell modules of its type on the market globally. 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<sup>™</sup>) is the 'Finger Print' of a solar cell. Tra.Q<sup>™</sup> 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

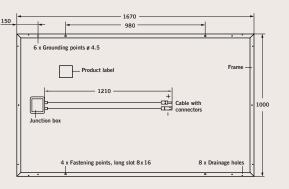
- **NEW! More energy output:** optimised light utilisation with non-corrosive anti-reflection technology.
- **Controlled quality:** Q.PRO-G2 modules continuously pass the most stringent testing program in the PV sector and carry the quality certificate 'VDE Quality Tested' awarded by the Association of German Engineers.
- **Guaranteed performance:** Q.CELLS offers the best warranties on the market. A 10-year product warranty plus a 25-year linear performance warranty<sup>2</sup>.



APT test conditions: Cells at -1000 V against grounded, with conductive metal foil covered module surface, 25 °C, 168 h (TŪV test conditions) See data sheet on rear for further information.

#### MECHANICAL SPECIFICATION

Format	1670 mm x 1000 mm x 50 mm (including frame)	
Weight	19.8 kg	1
Front Cover	3.2 mm thermally pre-stressed glass with antireflection technology	
Back Cover	Composite film	
Frame	Anodised aluminum	
Cell	6 x 10 polycrystalline solar cells	
Junction box	116 mm x 153 mm x 20 mm Protection class IP68, with bypass diodes	
Cable	4 mm <sup>2</sup> Solar cable; (+) 1210 mm, (-) 1210 mm	
Connector	Yamaichi Y-SOL4, IP68	

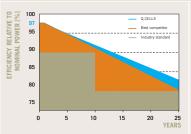


#### ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m², 25 °C, AM 1.5 G SPECTRUM) <sup>1</sup>										
NOMINAL POWER (+5 W/-0 W)		[W]	240	245	250	255				
Average Power	P <sub>MPP</sub>	[W]	242.5	247.5	252.5	257.5				
Short Circuit Current	Isc	[A]	8.76	8.85	8.94	9.03				
Open Circuit Voltage	V <sub>oc</sub>	[V]	37.35	37.56	37.78	37.99				
Current at P <sub>MPP</sub>	I <sub>MPP</sub>	[A]	8.20	8.32	8.45	8.57				
Voltage at P <sub>MPP</sub>	$V_{\text{MPP}}$	[V]	29.57	29.73	29.89	30.04				
Efficiency (Nominal Power)	η	[%]	≥14.4	≥14.7	≥15.0	≥15.3				
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 47 ±3 °C. AM 1.5 G SPECTRUM) <sup>2</sup>										
NOMINAL POWER (+5 W/-0 W)		[W]	240	245	250	255				
Average Power	P <sub>MPP</sub>	[W]	176.8	180.5	184.1	187.8				
Short Circuit Current	Isc	[A]	7.07	7.14	7.22	7.29				
Open Circuit Voltage	V <sub>oc</sub>	[V]	34.29	34.49	34.69	34.89				
Current at P <sub>MPP</sub>	I <sub>MPP</sub>	[A]	6.56	6.65	6.75	6.85				
Voltage at P <sub>MPP</sub>	$V_{\text{MPP}}$	[V]	26.97	27.12	27.27	27.42				

<sup>1</sup> Measurement tolerances STC:  $\pm 3\%$  (P<sub>MPP</sub>);  $\pm 10\%$  (I<sub>SC</sub>, V<sub>OC</sub>, I<sub>MPP</sub>, V<sub>MPP</sub>)

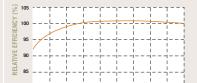
Q.CELLS PERFORMANCE WARRANTY



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 organization of your respective country.



<sup>2</sup> Measurement tolerances NOCT:  $\pm 5\%$  (P<sub>MPP</sub>);  $\pm 10\%$  (I<sub>SC</sub>, V<sub>OC</sub>, I<sub>MPP</sub>, V<sub>MPP</sub>)

PERFORMANCE AT LOW IRRADIANCE

200 300 400 500 600 700 800 900 1000

100

IRRADIANCE [W 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 -3% (relative).

TEMPERATURE COEFFICIENTS (AT 1000 W/m <sup>2</sup> , 25 °C, AM 1.5 G SPECTRUM)										
Temperature Coefficient of I <sub>sc</sub>	α	[%/K]	+0.04	Temperature Coefficient of $V_{oc}$ $\beta$ [%/			-0.33			
Temperature Coefficient of P <sub>MPP</sub>	γ	[%/K]	-0.43							
PROPERTIES FOR SYSTEM DESIGN										
Maximum System Voltage $V_{\mbox{\scriptsize sys}}$		[V]	1000	Safety Class		П	П			
Maximum Reverse Current $\mathbf{I}_{\mathrm{R}}$		[A]	20	Fire Rating		С	С			
Wind/Snow Load (in accordance with IEC 61215)		[Pa]	5400	Permitted module temperature on continous duty		-40	-40 °C up to +85 °C			
QUALIFICATIONS AND CERTIFICATES			PARTNER							
VDE Quality Tested; IEC 61215 (Ed.2); IEC 61730 (Ed.1), Application class A This data sheet complies with DIN EN 50380.										



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

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