



## MONOCRYSTALLINE SOLAR MODULE DATA SHEET

# Q.PEAK-G2 250-265

High performance and appearance

With more than three gigawatts of photovoltaic products deployed worldwide and a decade in the PV industry, Q.CELLS has the track-record to ensure the reliability behind our solar modules. Engineered in Germany and incorporating advanced in-house cell technologies, Q.CELLS modules give investors the assurance of high energy yields backed by an industry-leading linear performance warranty.

### YIELD SECURITY

Utilizing our latest high efficiency monocrystalline solar cells, Q.PEAK-G2 modules include:

- **Long term power assurance** across inverter platforms with Anti Potential-Induced Degradation (APT)<sup>1</sup> technology.
- Hot-Spot Protection (HSP) to **reduce the risk of module overheating**.
- End-to-end Traceable Quality (Tra.Q™) using a pioneering **laser identification matrix**.
- Positive power sorting delivers **more energy**.

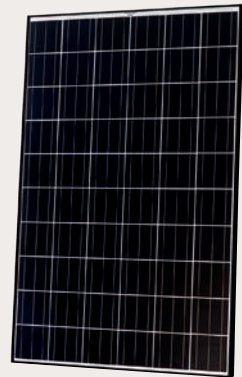
### INDEPENDENTLY VERIFIED RELIABILITY

- First company worldwide to qualify for the “VDE Quality Tested” seal of approval for solar modules independently **verifying reliability, durability, low degradation and continuous line monitoring**.

### INDUSTRY-LEADING WARRANTY

Monetizes high energy yield for investors<sup>2</sup>:

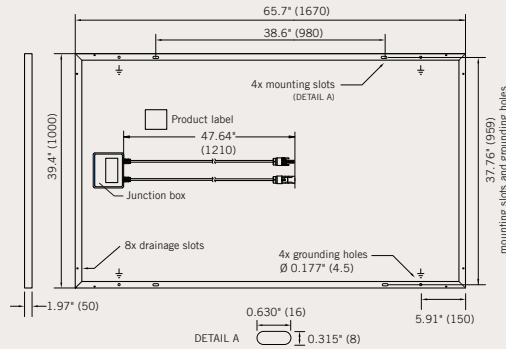
- 10-year product warranty
- 25-year linear performance warranty: 92 % after 10 years; 83 % after 25 years.



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

<sup>2</sup> For further information please see page 2 of this data sheet.

MECHANICAL SPECIFICATION	
<b>Format</b>	65.7 in x 39.4 in x 1.97 in (including frame) (1670 mm x 1000 mm x 50 mm)
<b>Weight</b>	43.65 lb (19.8 kg)
<b>Front Cover</b>	0.13 in (3.2 mm) thermally pre-stressed glass
<b>Back Cover</b>	Composite film
<b>Frame</b>	Black anodized aluminum
<b>Cell</b>	6 x 10 full-square monocrystalline solar cells
<b>Junction box</b>	Protection class IP68, with bypass diodes
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) 47.64 in (1210 mm), (-) 47.64 in (1210 mm)
<b>Connector</b>	Yamaichi Y-SOL4, IP68



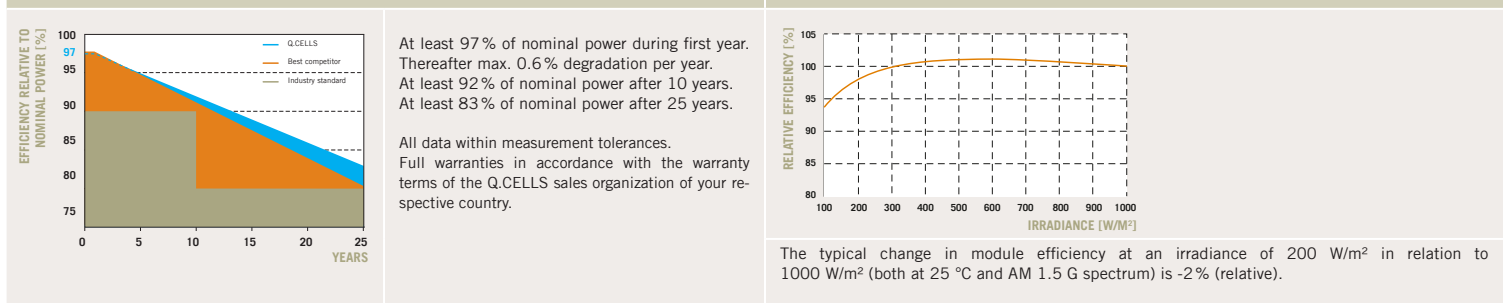
## ELECTRICAL CHARACTERISTICS

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 / -0 W)		[W]	250	255	260	265
<b>Average Power</b>	P <sub>MPP</sub>	[W]	252.5	257.5	262.5	267.5
<b>Efficiency (Nominal Efficiency)</b>	η	[%]	≥ 15.0	≥ 15.3	≥ 15.6	≥ 15.9
<b>Short Circuit Current</b>	I <sub>SC</sub>	[A]	9.07	9.12	9.17	9.23
<b>Open Circuit Voltage</b>	V <sub>OC</sub>	[V]	37.15	37.54	37.92	38.30
<b>Current at P<sub>MPP</sub></b>	I <sub>MPP</sub>	[A]	8.41	8.50	8.58	8.66
<b>Voltage at P<sub>MPP</sub></b>	V <sub>MPP</sub>	[V]	30.01	30.31	30.60	30.88

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

## Q.CELLS PERFORMANCE WARRANTY



## TEMPERATURE COEFFICIENTS (AT 1000 W/m<sup>2</sup>, AM 1.5 G SPECTRUM)

<b>Temperature Coefficient of I<sub>SC</sub></b>	α	[% / K]	+0.04	<b>Temperature Coefficient of V<sub>OC</sub></b>	β	[% / K]	-0.33
<b>Temperature Coefficient of P<sub>MPP</sub></b>	γ	[% / K]	-0.43	<b>NOCT</b>		[°F]	116 ± 5.4 (47 ± 3 °C)

## PROPERTIES FOR SYSTEM DESIGN

<b>Maximum System Voltage V<sub>sys</sub></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>Wind/Snow load (IEC)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	112 (5400 Pa)	<b>Permitted module temperature on continuous duty</b>	[°F]	-40 up to 185 (-40 °C up to 85 °C)
<b>Max. Load (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	75 (3600 Pa)			
<b>Load Rating (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	33 (1600 Pa)	<sup>2</sup> see installation manual		

## PACKING INFORMATION

<b>Number of Modules per Pallet</b>	20	<b>Pallet Dimensions ( L x W x H )</b>	68.1 in x 44.9 in x 47.2 in (1730 x 1140 x 1200 mm <sup>3</sup> )
<b>Number of Pallets per 53' Container</b>	36		
<b>Number of Pallets per 40' Container</b>	26	<b>Pallet Weight</b>	992 lb (450 kg)

## QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant; IEC 61215 (Ed.2); IEC 61730 (Ed.1) application class A		<b>PARTNER</b>	
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**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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### YIELD SECURITY

Utilizing our latest high efficiency monocrystalline solar cells, Q.PEAK-G2 modules include:

- **Long term power assurance** across inverter platforms with Anti Potential-Induced Degradation (APT)<sup>1</sup> technology.
- Hot-Spot Protection (HSP) to **reduce the risk of module overheating**.
- End-to-end Traceable Quality (Tra.Q™) using a pioneering **laser identification matrix**.
- **NEW! More energy output:** optimised light utilisation with non-corrosive anti-reflection technology.

### INDEPENDENTLY VERIFIED RELIABILITY

- First company worldwide to qualify for the “VDE Quality Tested” seal of approval for solar modules independently **verifying reliability, durability, low degradation and continuous line monitoring**.

### INDUSTRY-LEADING WARRANTY

Monetizes high energy yield for investors<sup>2</sup>:

- 10-year product warranty
- 25-year linear performance warranty: 92 % after 10 years; 83 % after 25 years.

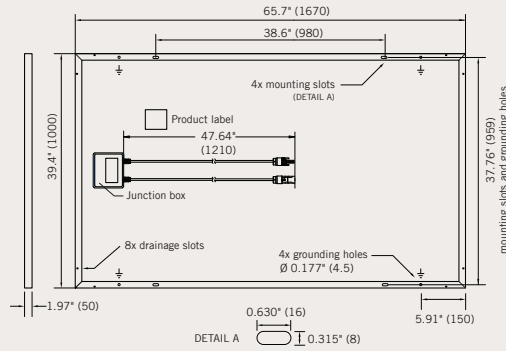


<sup>1</sup> APT test conditions: Cells at -1000 V against grounded, with conductive metal foil covered module surface, 25 °C, 168 h (TÜV test conditions)

<sup>2</sup> For further information please see page 2 of this data sheet.



MECHANICAL SPECIFICATION	
<b>Format</b>	65.7 in x 39.4 in x 1.97 in (including frame) (1670 mm x 1000 mm x 50 mm)
<b>Weight</b>	43.65 lb (19.8 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 full-square monocrystalline solar cells
<b>Junction box</b>	Protection class IP68, with bypass diodes
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) 47.64 in (1210 mm), (-) 47.64 in (1210 mm)
<b>Connector</b>	Yamaichi Y-SOL4, IP68



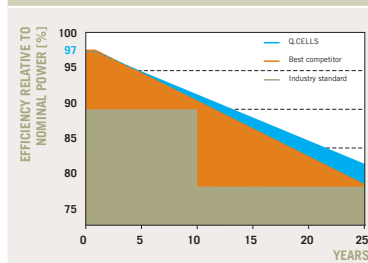
## ELECTRICAL CHARACTERISTICS

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

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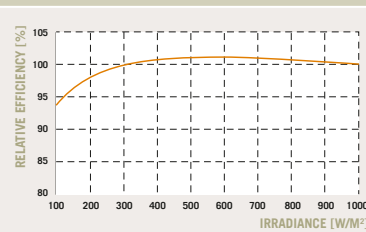
## Q.CELLS PERFORMANCE WARRANTY



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.

## 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>, AM 1.5 G SPECTRUM)

<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]	-0.33
<b>Temperature Coefficient of P<sub>MPP</sub></b>	<b>γ</b>	[% / K]	-0.43	<b>NOCT</b>		[°F]	116 ± 5.4 (47 ± 3 °C)

## PROPERTIES FOR SYSTEM DESIGN

<b>Maximum System Voltage V<sub>sys</sub></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>Wind/Snow load (IEC)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	112 (5400 Pa)	<b>Permitted module temperature on continuous duty</b>	[°F]	-40 up to 185 (-40 °C up to 85 °C)
<b>Max. Load (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	75 (3600 Pa)			
<b>Load Rating (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	33 (1600 Pa)	<sup>2</sup> see installation manual		

## PACKING INFORMATION

<b>Number of Modules per Pallet</b>	20	<b>Pallet Dimensions ( L x W x H )</b>	68.1 in x 44.9 in x 47.2 in (1730 x 1140 x 1200 mm <sup>3</sup> )
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<b>Number of Pallets per 40' Container</b>	26	<b>Pallet Weight</b>	992 lb (450 kg)

## QUALIFICATIONS AND CERTIFICATES

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



## PARTNER

**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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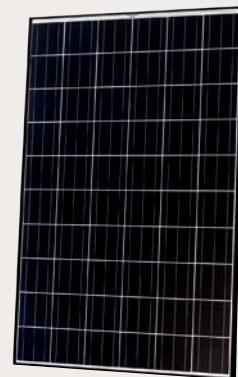
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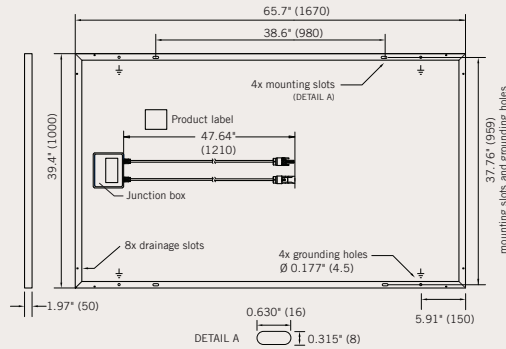
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<b>Junction box</b>	Protection class IP65, with bypass diodes
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) 47.64 in (1210 mm), (-) 47.64 in (1210 mm)
<b>Connector</b>	SOLARLOK PV4, IP68



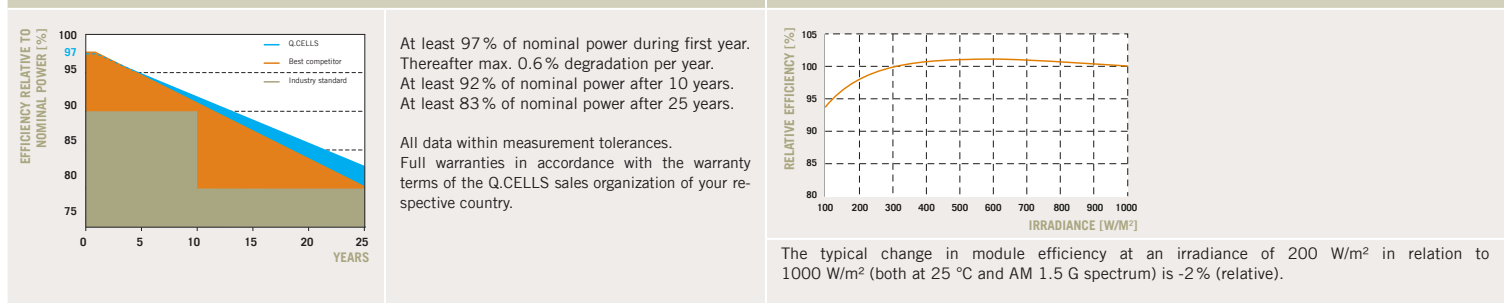
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## Q.CELLS PERFORMANCE WARRANTY



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<b>Maximum Series Fuse Rating</b>	[A DC]	20	<b>Fire Rating</b>		C
<b>Wind/Snow load (IEC)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	112 (5400 Pa)	<b>Permitted module temperature on continuous duty</b>	[°F]	-40 up to 185 (-40 °C up to 85 °C)
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<b>Load Rating (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	33 (1600 Pa)	<sup>2</sup> see installation manual		

## PACKING INFORMATION

<b>Number of Modules per Pallet</b>	20	<b>Pallet Dimensions ( L x W x H )</b>	68.1 in x 44.9 in x 47.2 in (1730 x 1140 x 1200 mm <sup>3</sup> )
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## QUALIFICATIONS AND CERTIFICATES

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