

## MONOCRYSTALLINE SOLAR MODULE

# Q.PEAK 245-265

Maximum power and reliability

The monocrystalline Q.PEAK solar module with power classes up to 265 W is one of the most powerful 60 cell standard modules on the market globally. But be careful: Not all solar modules are the same. 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

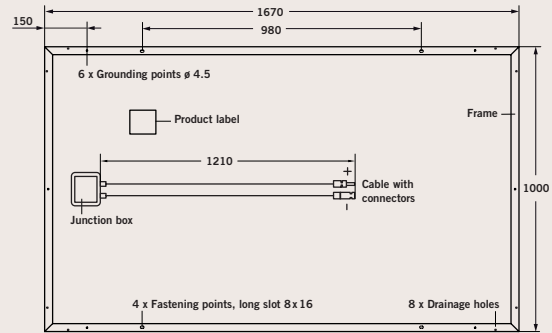
- **Improved energy yield:** The actual output of all Q.CELLS solar modules is up to 5 Wp higher than the nominal power thanks to positive sorting.
- **Controlled quality:** Q.CELLS tests its solar modules in the world's largest module testing center at head office in Thalheim, Germany, longer and more stringently than prescribed in the standards.
- **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>.



<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> See data sheet on rear for further information.

## MECHANICAL SPECIFICATION

|                     |   |
|---------------------|---|
| <b>Format</b>       | 1670 mm x 1000 mm x 50 mm (including frame)                           |
| <b>Weight</b>       | 19.8 kg   |
| <b>Front Cover</b>  | 3.2 mm thermally pre-stressed solar glass                             |
| <b>Back Cover</b>   | Composite film  |
| <b>Frame</b>        | Anodised aluminium  |
| <b>Cell</b>         | 6 x 10 monocrystalline solar cells                                    |
| <b>Junction box</b> | 116 mm x 153 mm x 20 mm<br>Protection class IP 68, with bypass diodes |
| <b>Cable</b>        | 4 mm <sup>2</sup> Solar cable; (+) 1210 mm, (-) 1210 mm               |
| <b>Connector</b>    | Yamaichi Y-SOL4, IP 68  |



## 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] | 245   | 250   | 255   | 260   | 265   |
|-----------------------------------|------------------------|-----|-------|-------|-------|-------|-------|
| <b>Average Power</b>              | <b>P<sub>MPP</sub></b> | [W] | 247.5 | 252.5 | 257.5 | 262.5 | 267.5 |
| <b>Short Circuit Current</b>      | <b>I<sub>SC</sub></b>  | [A] | 9.01  | 9.07  | 9.12  | 9.17  | 9.23  |
| <b>Open Circuit Voltage</b>       | <b>V<sub>OC</sub></b>  | [V] | 36.76 | 37.15 | 37.54 | 37.92 | 38.30 |
| <b>Current at P<sub>MPP</sub></b> | <b>I<sub>MPP</sub></b> | [A] | 8.33  | 8.41  | 8.50  | 8.58  | 8.66  |
| <b>Voltage at P<sub>MPP</sub></b> | <b>V<sub>MPP</sub></b> | [V] | 29.71 | 30.01 | 30.31 | 30.60 | 30.88 |
| <b>Efficiency (Nominal Power)</b> | <b>η</b>               | [%] | ≥14.7 | ≥15.0 | ≥15.3 | ≥15.6 | ≥15.9 |

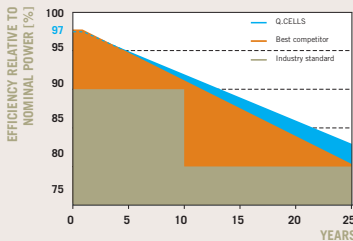
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m<sup>2</sup>, 47 ±3 °C, AM 1.5 G SPECTRUM)<sup>2</sup>

| NOMINAL POWER (+5 / -0 W)         |                        | [W] | 245    | 250    | 255    | 260    | 265    |
|-----------------------------------|------------------------|-----|--------|--------|--------|--------|--------|
| <b>Average Power</b>              | <b>P<sub>MPP</sub></b> | [W] | 180.65 | 184.30 | 187.95 | 191.60 | 195.25 |
| <b>Short Circuit Current</b>      | <b>I<sub>SC</sub></b>  | [A] | 7.28   | 7.32   | 7.36   | 7.40   | 7.45   |
| <b>Open Circuit Voltage</b>       | <b>V<sub>OC</sub></b>  | [V] | 33.74  | 34.11  | 34.47  | 34.83  | 35.17  |
| <b>Current at P<sub>MPP</sub></b> | <b>I<sub>MPP</sub></b> | [A] | 6.66   | 6.72   | 6.79   | 6.85   | 6.92   |
| <b>Voltage at P<sub>MPP</sub></b> | <b>V<sub>MPP</sub></b> | [V] | 27.13  | 27.41  | 27.69  | 27.96  | 28.22  |

<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>)

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

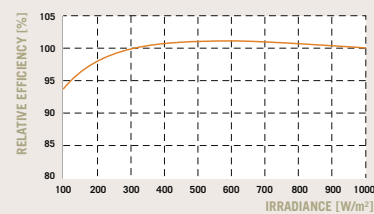
## Q.CELLS PERFORMANCE WARRANTY



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>, 25 °C, 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 |  |          |       |       |

## PROPERTIES FOR SYSTEM DESIGN

|  |      |      |  |                     |
|--|------|------|--|---------------------|
| <b>Maximum System Voltage V<sub>sys</sub></b>        | [V]  | 1000 | <b>Safety Class</b>                                    | II                  |
| <b>Maximum Reverse Current I<sub>R</sub></b>         | [A]  | 20   | <b>Fire Rating</b>                                     | C                   |
| <b>Wind/Snow Load (in accordance with IEC 61215)</b> | [Pa] | 5400 | <b>Permitted module temperature on continuous duty</b> | -40 °C up to +85 °C |

## QUALIFICATIONS AND CERTIFICATES

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



## PARTNER

**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.