

Q CELLS
YIELD SECURITY

- ✓ ANTI PID TECHNOLOGY (APT)
- ✓ HOT-SPOT PROTECT (HSP)
- ✓ TRACEABLE QUALITY (TRA.Q™)

VDE
Quality Tested

- ✓ High reliability
- ✓ Low degradation
- ✓ Precise product surveillance

ID 40032987

EUPD RESEARCH
TOP BRAND PV
MODULES
GERMANY
2012

MONOCRYSTALLINE SOLAR MODULE

Q.PEAK-G3 265-280

High performance. Reliability.

With up to 280 Wp, the new **Q.PEAK-G3** is the champion of monocrystalline solar modules. 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 – **MADE IN EUROPE**.

INNOVATIVE ALL-WEATHER TECHNOLOGY

- Maximum yields whatever the weather with **excellent low-light and temperature behaviour**.
- **Increased cell efficiency** due to full-square monocrystalline cells.

ENDURING HIGH PERFORMANCE

- **Long-term Yield Security** due to Anti PID Technology¹, 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-intermediate 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 **29% lower logistics costs** due to higher module capacity per box.

EXTENDED WARRANTIES

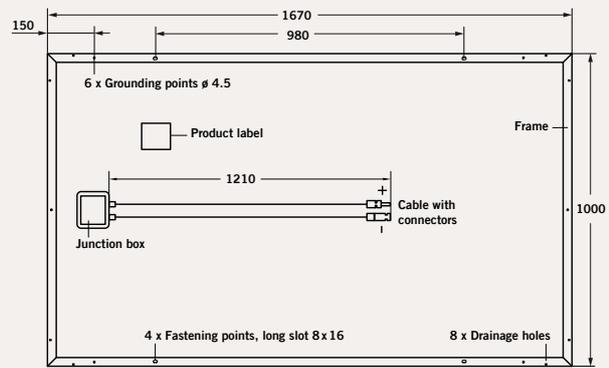
- Investment security due to **12-year product warranty** and **25-year linear performance warranty**².



¹ APT test conditions: Cells at -1000 V against grounded, with conductive metal foil covered module surface, 25 °C, 168 h
² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	1670 mm x 1000 mm x 35 mm (including frame)
Weight	19 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodised aluminium
Cell	6 x 10 monocrystalline solar cells
Junction box	110 mm x 115 mm x 23 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) 1210 mm, (-) 1210 mm
Connector	SOLARLOK PV4, IP68



ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m², 25 °C, AM 1.5 G SPECTRUM)¹

		[W]	265	270	275	280
NOMINAL POWER (+5 W/-0 W)		[W]	265	270	275	280
Average Power	P_{MPP}	[W]	267.5	272.5	277.5	282.5
Short Circuit Current	I_{SC}	[A]	9.15	9.25	9.35	9.45
Open Circuit Voltage	V_{OC}	[V]	37.91	38.21	38.51	38.81
Current at P_{MPP}	I_{MPP}	[A]	8.65	8.75	8.85	8.95
Voltage at P_{MPP}	V_{MPP}	[V]	30.94	31.16	31.37	31.58
Efficiency (Nominal Power)	η	[%]	≥ 15.9	≥ 16.2	≥ 16.5	≥ 16.8

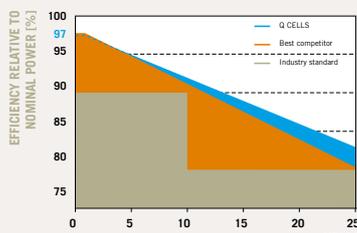
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ± 3 °C, AM 1.5 G SPECTRUM)²

		[W]	265	270	275	280
NOMINAL POWER (+5 W/-0 W)		[W]	265	270	275	280
Average Power	P_{MPP}	[W]	197.0	200.7	204.3	208.0
Short Circuit Current	I_{SC}	[A]	7.38	7.46	7.54	7.62
Open Circuit Voltage	V_{OC}	[V]	35.07	35.35	35.62	35.90
Current at P_{MPP}	I_{MPP}	[A]	6.79	6.87	6.95	7.03
Voltage at P_{MPP}	V_{MPP}	[V]	29.01	29.21	29.41	29.60

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

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

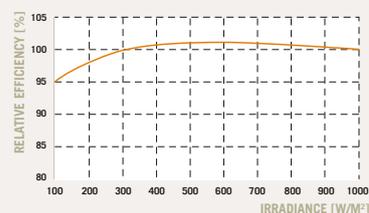
Q CELLS PERFORMANCE WARRANTY



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/m² in relation to 1000 W/m² (both at 25 °C and AM 1.5 G spectrum) is -2% (relative).

TEMPERATURE COEFFICIENTS (AT 1000 W/m², 25 °C, AM 1.5 G SPECTRUM)

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	-0.33
Temperature Coefficient of P_{MPP}	γ	[%/K]	-0.42				

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000	Safety Class	II
Maximum Reverse Current I_R	[A]	20	Fire Rating	C
Wind/Snow Load (in accordance with IEC 61215)	[Pa]	5400	Permitted module temperature on continuous duty	-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 our technical service department for further information on approved installation and use of this product.

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