

Q.PRO L 295-315

POLYCRYSTALLINE SOLAR MODULE

The polycrystalline solar module **Q.PRO L** solar module 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 2 m² **Q.PRO L** 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)¹.
- 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: Q CELLS offers the best warranties on the market. A 12-year product warranty plus a 25-year linear performance warranty².



THE IDEAL SOLUTION FOR:



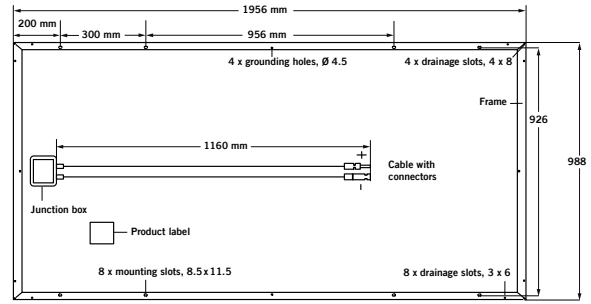
Ground-mounted solar power plant

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

² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	1956 mm x 988 mm x 45 mm (including frame)
Weight	27±0.5 kg
Front Cover	4.0 mm thermally pre-stressed glass with antireflection coating (ARC)
Back Cover	Composite film
Frame	Anodised aluminium
Cell	6 x 12 polycrystalline solar cells
Junction box	110 mm x 115 mm x 23 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 1160 mm, (-) ≥ 1160 mm
Connector	SOLARLOK PV4, IP68



ELECTRICAL CHARACTERISTICS

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

NOMINAL POWER (+5 W/-0 W)	[W]	295	300	305	310	315
Average Power	P_{MPP} [W]	297.5	302.5	307.5	312.5	317.5
Short Circuit Current	I_{SC} [A]	8.89	8.93	8.97	9.01	9.06
Open Circuit Voltage	V_{OC} [V]	44.99	45.27	45.56	45.84	46.13
Current at P_{MPP}	I_{MPP} [A]	8.28	8.34	8.40	8.47	8.53
Voltage at P_{MPP}	V_{MPP} [V]	35.94	36.27	36.59	36.91	37.23
Efficiency (Nominal Power)	η [%]	≥ 15.3	≥ 15.5	≥ 15.8	≥ 16.0	≥ 16.3

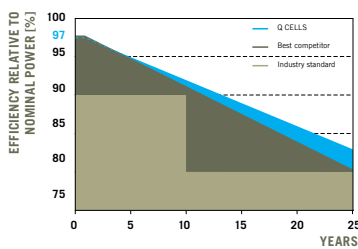
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ± 3 °C, AM 1.5 G SPECTRUM)²

NOMINAL POWER (+5 W/-0 W)	[W]	295	300	305	310	315
Average Power	P_{MPP} [W]	219.2	222.9	226.6	230.3	233.9
Short Circuit Current	I_{SC} [A]	7.17	7.20	7.24	7.27	7.30
Open Circuit Voltage	V_{OC} [V]	41.87	42.14	42.41	42.68	42.95
Current at P_{MPP}	I_{MPP} [A]	6.47	6.53	6.58	6.64	6.69
Voltage at P_{MPP}	V_{MPP} [V]	33.86	34.15	34.42	34.70	34.97

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})

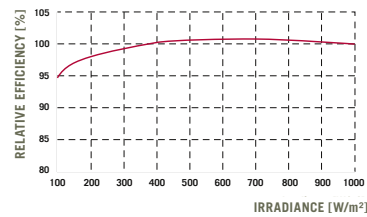
Q CELLS PERFORMANCE WARRANTY



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]	- 0.30
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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Engineered in Germany

