

Q.PEAK-G4.1/MAX 300-305

SMART MONOCRYSTALLINE Q.ANTUM SOLAR MODULE

The new high-performance module **Q.PEAK-G4.1/MAX** secures the highest yields due to our innovative **Q.ANTUM** cell technology and a module integrated cell string optimizing technology from **MAXIM INTEGRATED™**. It is the ideal solution for residential, commercial and space constrained applications. The integrated cell string optimizer eliminates performance mismatch due to shading, soiling or degradation at the most granular level.



UP TO 25% MORE YIELD

Industry's best shade tolerance – optimized performance on cell string level.



HIGHER POWER DENSITY

Every cell string can harvest energy even from shaded, soiled, or snowed-on cell strings, allowing you to pack more modules into your design.



FLEXIBLE SYSTEM SIZE

High flexibility regarding string lengths and panel orientation leads to a significant reduction of planning and installation cost.



ENDURING HIGH PERFORMANCE

Long-term yield security with Power Optimizing, Anti PID Technology, Hot-Spot Protect and Traceable Quality Tra.Q™.



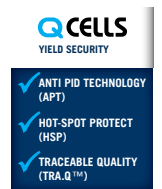
LOW ELECTRICITY GENERATION COSTS

Higher yields per surface area and lower BOS costs thanks to higher power classes and embedded cell string optimizer.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields due to excellent low-light and temperature behavior as well as mitigation of mismatch-loss caused by partial shading, soiling or degradation.



THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings

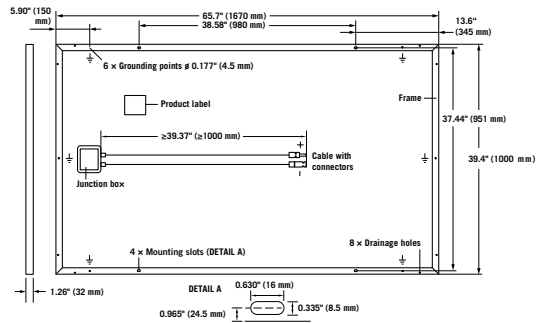
Engineered in **Germany**

¹ APT test conditions: Cells at -1500V against grounded, with conductive metal foil covered module surface, 25°C, 168h

² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	65.7 in × 39.4 in × 1.26 in (including frame) (1670 mm × 1000 mm × 32 mm)
Weight	41.45 lbs (18.8 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 10 monocrystalline Q.ANTUM solar cells
Junction box	5.08 × 4.41 × 0.83 in (129 × 112 × 21 mm), Protection class IP68, with MLPE chip set
Cable	4 mm ² Solar cable; (+) ≥ 39.37 in (1000 mm), (-) ≥ 39.37 in (1000 mm)
Connector	Multi-Contact MC4 or MC4 intermateable, IP68



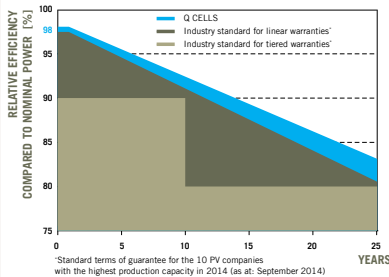
ELECTRICAL CHARACTERISTICS

POWER CLASS			300	305
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5 W / -0 W)				
Minimum	Power at MPP²	P_{MPP} [W]	300	305
	Short Circuit Current*	I_{SC} [A]	9.77	9.84
	Open Circuit Voltage**	V_{OC} [V]	35.0	35.0
	Current at MPP*	I_{MPP} [A]	9.26	9.35
	Voltage at MPP*	V_{MPP} [V]	32.41	32.62
	Efficiency²	η [%]	≥ 18.0	≥ 18.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC³				
Minimum	Power at MPP²	P_{MPP} [W]	222.0	225.7
	Short Circuit Current*	I_{SC} [A]	7.88	7.94
	Open Circuit Voltage**	V_{OC} [V]	35.0	35.0
	Current at MPP*	I_{MPP} [A]	7.27	7.35
	Voltage at MPP*	V_{MPP} [V]	30.52	30.70

¹1000 W/m², 25 °C, spectrum AM 1.5 G ²Measurement tolerances STC ± 3%; NOC ± 5% ³800 W/m², NOCT, spectrum AM 1.5 G * typical values, actual values may differ

** This module contains an integrated DC/DC converter. The values of V_{MPP} and V_{OC} will not exceed V_{LIM}. Complies with 2017 NEC 690.7 (B)(2) and 690.8 (A)(6).

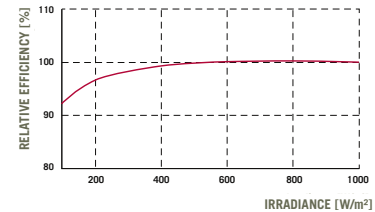
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.6% degradation per year. At least 92.6% of nominal power up to 10 years. At least 83.6% of nominal power up to 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



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	-0.28
Temperature Coefficient of P_{MPP}	γ	[%/K]	-0.39	Normal Operating Cell Temperature	NOCT	[°F]	113 ± 5.4 (45 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000 (IEC) / 1000 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	15	Fire Rating	C (IEC) / TYPE 1 (UL)
Design load, push (UL)²	[lbs/ft²]	75 (3600 Pa)	Permitted module temperature on continuous duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Design load, pull (UL)²	[lbs/ft²]	55.6 (2666 Pa)	² see installation manual	
Maximum Output Current (I_{LIM})	[A]**	12		
Maximum Output Voltage (V_{LIM})	[V]**	35.0		

QUALIFICATIONS AND CERTIFICATES

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



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 53' Container	30
Number of Pallets per 40' Container	26
Pallet Dimensions (L × W × H)	68.7 in × 45.3 in × 46.1 in (1745 mm × 1150 mm × 1170 mm)
Pallet Weight	1435 lbs (651 kg)

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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