

# Q.PEAK-G4.1/SC 295-305

## Q.ANTUM ULTRA SOLAR MODULE

The new high-performance module **Q.PEAK-G4.1/SC** is the ideal solution for all applications thanks to its innovative cell technology **Q.ANTUM Ultra** and a **black Zep Compatible™** frame design for improved aesthetics, easy installation and increased safety. The world-record cell design was developed to achieve the best performance under real conditions – even with low radiation intensity and on clear, hot summer days.



### LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area and lower BOS costs thanks to higher power classes and an efficiency rate of up to 18.6%.



### INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



### ENDURING HIGH PERFORMANCE

Long-term yield security with Anti-PID Technology<sup>1</sup>, Hot-Spot-Protect and Traceable Quality Tra.Q™.

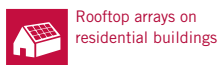


### A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance guarantee<sup>2</sup>.



### THE IDEAL SOLUTION FOR:

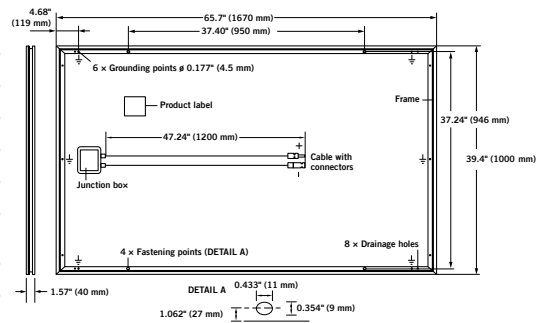


Engineered in **Germany**

<sup>1</sup> APT test conditions: Cells at -1500V against grounded, with conductive metal foil covered module surface, 25 °C, 168h  
<sup>2</sup> See data sheet on rear for further information.

## MECHANICAL SPECIFICATION

<b>Format</b>	65.7 in × 39.4 in × 1.57 in (including frame) (1670 mm × 1000 mm × 40 mm)
<b>Weight</b>	44.09 lbs (20.0 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 × 10 monocrystalline Q.ANTUM solar cells
<b>Junction box</b>	2.60-3.03 in × 4.37-3.54 in × 0.59-0.75 in (66-77 mm × 111-90 mm × 15-19 mm), Protection class IP67, with bypass diodes
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) 47.24 in (1200 mm), (-) 47.24 in (1200 mm)
<b>Connector</b>	Multi-Contact MC4, IP68

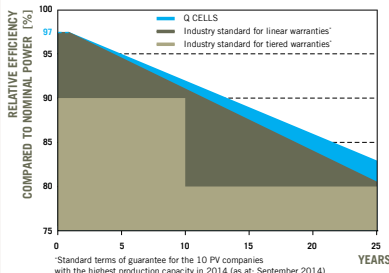


## ELECTRICAL CHARACTERISTICS

POWER CLASS		295	300	305	
<b>MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC<sup>1</sup> (POWER TOLERANCE +5 W / -0 W)</b>					
Minimum	Power at MPP <sup>2</sup>	$P_{MPP}$ [W]	295	300	305
	Short Circuit Current*	$I_{SC}$ [A]	9.70	9.77	9.84
	Open Circuit Voltage*	$V_{OC}$ [V]	39.48	39.76	40.05
	Current at MPP*	$I_{MPP}$ [A]	9.17	9.26	9.35
	Voltage at MPP*	$V_{MPP}$ [V]	32.19	32.41	32.62
	Efficiency <sup>2</sup>	$\eta$ [%]	≥ 17.7	≥ 18.0	≥ 18.3
<b>MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC<sup>3</sup></b>					
Minimum	Power at MPP <sup>2</sup>	$P_{MPP}$ [W]	218.1	221.8	225.5
	Short Circuit Current*	$I_{SC}$ [A]	7.82	7.88	7.94
	Open Circuit Voltage*	$V_{OC}$ [V]	36.92	37.19	37.46
	Current at MPP*	$I_{MPP}$ [A]	7.20	7.27	7.35
	Voltage at MPP*	$V_{MPP}$ [V]	30.30	30.49	30.67

<sup>1</sup> 1000 W/m<sup>2</sup>, 25 °C, spectrum AM 1.5G    <sup>2</sup> Measurement tolerances STC ± 3 %; NOC ± 5 %    <sup>3</sup> 800 W/m<sup>2</sup>, NOCT, spectrum AM 1.5G    \* typical values, actual values may differ

## Q CELLS PERFORMANCE WARRANTY

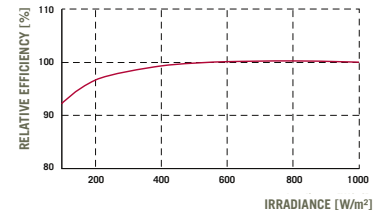


At least 97% of nominal power during first year. Thereafter max. 0.6% degradation per year. At least 92% of nominal power up to 10 years. At least 83% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organization of your respective country.

\*Standard terms of guarantee for the 10 PV companies with the highest production capacity in 2014 (as at: September 2014)

## PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m<sup>2</sup>).

## TEMPERATURE COEFFICIENTS

<b>Temperature Coefficient of <math>I_{SC}</math></b>	$\alpha$	[%/K]	+0.04	<b>Temperature Coefficient of <math>V_{OC}</math></b>	$\beta$	[%/K]	-0.28
<b>Temperature Coefficient of <math>P_{MPP}</math></b>	$\gamma$	[%/K]	-0.39	<b>Normal Operating Cell Temperature</b>	<b>NOCT</b>	[°F]	113 ± 5.4 (45 ± 3°C)

## PROPERTIES FOR SYSTEM DESIGN

<b>Maximum System Voltage <math>V_{SYS}</math></b>	[V]	1000 (IEC) / 1000 (UL)	<b>Safety Class</b>	II
<b>Maximum Series Fuse Rating</b>	[A DC]	20	<b>Fire Rating</b>	C (IEC) / TYPE 1 (UL)
<b>Design load, push (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	75 (3600 Pa)	<b>Permitted module temperature on continuous duty</b>	-40°F up to +185°F (-40°C up to +85°C)
<b>Design load, pull (UL)<sup>2</sup></b>	[lbs/ft <sup>2</sup> ]	55.6 (2666 Pa)	<sup>2</sup> see installation manual	

## QUALIFICATIONS AND CERTIFICATES

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



## PACKAGING INFORMATION

<b>Number of Modules per Pallet</b>	26
<b>Number of Pallets per 53' Container</b>	32
<b>Number of Pallets per 40' Container</b>	26
<b>Pallet Dimensions (L × W × H)</b>	68.7 in × 45.3 in × 46.1 in (1745 mm × 1150 mm × 1170 mm)
<b>Pallet Weight</b>	1254 lbs (569 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.

**Hanwha Q CELLS America Inc.**

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