

# Q.ANTUM SOLAR MODULE

powered by

**Q.ANTUM** 

The Q.ANTUM solar module Q.PLUS L-G4.2 is the strongest module of its type on the market globally. Powered by 72 Q CELLS solar cells Q.PLUS L-G4.2 was specially designed for large solar power plants to reduce BOS costs. Only Q CELLS offers German engineering quality with our unique Yield Security.



### **Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY**

Higher yield per surface area and lower BOS costs thanks to higher power classes and an efficiency rate of up to 17.6 %.



## **INNOVATIVE ALL-WEATHER TECHNOLOGY**

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



## **ENDURING HIGH PERFORMANCE**

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



## **EXTREME WEATHER RATING**

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (2400 Pa).



## **A RELIABLE INVESTMENT**

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

#### THE IDEAL SOLUTION FOR:



solar power plants







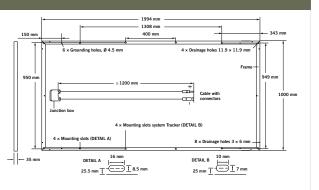
- <sup>1</sup> APT test conditions: Cells at -1500V against grounded, with conductive metal foil covered module surface, 25°C,168h
- <sup>2</sup> See data sheet on rear for further information.



Engineered in Germany

#### MECHANICAL SPECIFICATION

Format	$1994\text{mm}\times1000\text{mm}\times35\text{mm}$ (including frame)
Weight	24 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodised aluminium
Cell	$6 \times 12$ Q.ANTUM solar cells
Junction box	85-115 $\times$ 60-80 $\times$ 15-19 mm, Protection class $\geq$ IP67, with bypass diodes
Cable	$4mm^2$ Solar cable; (+) $\geq\!1200mm,\geq$ (-) $1200mm$
Connector	MC4-EVO2, IP68

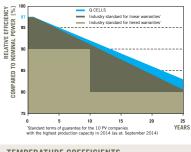


# ELECTRICAL CHARACTERISTICS

PO	WER CLASS		335	340	345
MI	NIMUM PERFORMANCE AT STANDARD	TEST CONDITIONS, STC <sup>1</sup> (POWER TO	LERANCE +5 W / -0 W)		
	Power at MPP <sup>2</sup>	P <sub>MPP</sub>	335	340	345
_	Short Circuit Current*	I <sub>sc</sub>	9.54	9.59	9.64
mu	Open Circuit Voltage*	V <sub>oc</sub>	46.81	47.07	47.46
Minimum	Current at MPP*	I <sub>MPP</sub>	8.97	9.03	9.09
-	Voltage at MPP*	V <sub>MPP</sub>	37.33	37.63	37.93
	Efficiency <sup>2</sup>	η	≥16.8	≥17.1	≥17.3
MI	NIMUM PERFORMANCE AT NORMAL O	PERATING CONDITIONS, NOC <sup>3</sup>			
	Power at MPP <sup>2</sup>	P <sub>MPP</sub>	248.4	252.1	255.8
Ę	Short Circuit Current*	I <sub>sc</sub>	7.69	7.73	7.77
Minimum	Open Circuit Voltage* V <sub>oc</sub> Current at MPP* I <sub>MPP</sub>	V <sub>oc</sub>	43.68	43.92	44.29
ž		7.04	7.09	7.14	
	Voltage at MPP*	V <sub>MPP</sub>	35.29	35.56	35.83

<sup>1</sup>1000 W/m<sup>2</sup>, 25 °C, spectrum AM 1.5 G  $^2$  Measurement tolerances STC  $\pm 3$  %; NOC  $\pm 5$  %  $^{-3}$  800 W/m², NOCT, spectrum AM 1.5 G \* 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 organisation of your respective country.



400

PERFORMANCE AT LOW IRRADIANCE

≥ <sup>110</sup>

80

200

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

800

1000 IRRADIANCE [W/M<sup>2</sup>]

600

TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I <sub>sc</sub>	α	[%/K]	+0.04	Temperature Coefficient of $V_{oc}$	β	[%/K]	-0.29
Temperature Coefficient of $\mathbf{P}_{_{\mathrm{MPP}}}$	γ	[%/K]	-0.40	Normal Operating Cell Temperature	NOCT	[°C]	45
PROPERTIES FOR SYSTEM	DESIG	iN					
Maximum System Voltage	V <sub>sys</sub>	[V]	1500 (IEC) / 1500 (UL)	Safety Class		11	
Maximum Reverse Current	I <sub>R</sub>	[A]	15	Fire Rating		C / TYPE 1	
Wind/Snow Load (in accordance with IEC 61215)		[Pa]	2400/5400	Permitted Module Temperature On Continuous Duty		-40°C up to +85°C	
QUALIFICATIONS AND CER	TIFICA	TES		PARTNER			
IEC 61215 (Ed 2): IEC 61730 (Ed 1	) Applic:	ation class A					

This data sheet complies with DIN EN 50380.



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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