





(5400 Pa) and wind loads (4000 Pa).



### A RELIABLE INVESTMENT

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



# STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative 12-busbar design with Q.ANTUM Technology.

# THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings

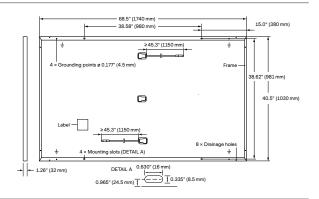


Rooftop arrays on commercial/industrial buildings



 $<sup>^{\</sup>rm 1}$  APT test conditions according to IEC/TS 62804-1:2015, method B (–1500 V, 168 h)

<sup>&</sup>lt;sup>2</sup> See data sheet on rear for further information

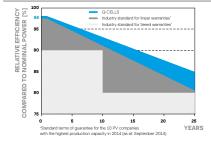


### **ELECTRICAL CHARACTERISTICS**

PO	VER CLASS			345	350	355	360
MIN	IIMUM PERFORMANCE AT STANDARD TES	CONDITIC	NS, STC¹ (F	POWER TOLERANCE +5W/-0	W)		
Minimum	Power at MPP¹	P <sub>MPP</sub>	[W]	345	350	355	360
	Short Circuit Current <sup>1</sup>	I <sub>sc</sub>	[A]	10.68	10.74	10.79	10.84
	Open Circuit Voltage <sup>1</sup>	V <sub>oc</sub>	[V]	40.45	40.70	40.95	41.19
	Current at MPP	I <sub>MPP</sub>	[A]	10.17	10.22	10.28	10.33
	Voltage at MPP	$V_{MPP}$	[V]	33.92	34.24	34.55	34.85
	Efficiency <sup>1</sup>	η	[%]	≥19.3	≥19.5	≥19.8	≥20.1
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>							
	Power at MPP	P <sub>MPP</sub>	[W]	258.4	262.1	265.9	269.6
Minimum	Short Circuit Current	I <sub>sc</sub>	[A]	8.61	8.65	8.69	8.74
	Open Circuit Voltage	V <sub>oc</sub>	[V]	38.14	38.38	38.61	38.85
	Current at MPP	I <sub>MPP</sub>	[A]	8.00	8.05	8.09	8.13
	Voltage at MPP	V <sub>MPP</sub>	[V]	32.28	32.57	32.87	33.16

¹Measurement tolerances P<sub>MPP</sub> ±3%; I<sub>SC</sub>; V<sub>OC</sub> ±5% at STC: 1000 W/m², 25±2°C, AM 1.5 according to IEC 60904-3 • ²800 W/m², NMOT, spectrum AM 1.5

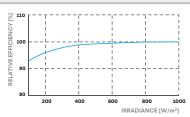
#### Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 93.1% of nominal power up to 10 years. At least 85% 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 <sub>SC</sub>	α	[%/K]	+0.04	Temperature Coefficient of Voc	β	[%/K]	-0.27
Temperature Coefficient of Page	V	[%/K]	-0.35	Nominal Module Operating Temperature	NMOT	[°F]	109+5.4 (43+3°C)

# PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V <sub>SYS</sub>	[V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI/UL 61730	TYPE 2
Max. Design Load, Push / Pull <sup>3</sup>	[lbs/ft <sup>2</sup> ]	75 (3600 Pa) / 55 (2667 Pa)	Permitted Module Temperature	-40°F up to +185°F
Max. Test Load, Push / Pull <sup>3</sup>	[lbs/ft <sup>2</sup> ]	113 (5400 Pa) / 84 (4000 Pa)	on Continuous Duty	(-40°C up to +85°C)

## **QUALIFICATIONS AND CERTIFICATES**

## PACKAGING AND TRANSPORT INFORMATION

UL 61730, CE-compliant, VDE Quality Tested, IEC 61215:2016 IEC 61730:2016. U.S. Patent No. 9,893,215 (solar cells)

<sup>3</sup> See Installation Manual







		42.5 in 1080 mm		-
taging	1/00111111	1000111111	120011111	_
ical	71.5 in	45.3 in	48.0 in	-



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. Q CELLS supplies solar modules in two different stacking methods, depending on the location of manufacture (modules are packed horizontally or vertically). You can find more detailed information in the document "Packaging and Transport Information", available from Q CELLS

#### Hanwha Q CELLS America Inc.