





### **BREAKING THE 20% EFFICIENCY BARRIER**

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.1%.



#### **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 LID Technology, Hot-Spot Protect and Traceable Quality Tra.Q™.



# **EXTREME WEATHER RATING**

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



# A RELIABLE INVESTMENT

Inclusive 15-year product warranty and 25-year linear performance warranty<sup>1</sup>.



# STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

# THE IDEAL SOLUTION FOR:



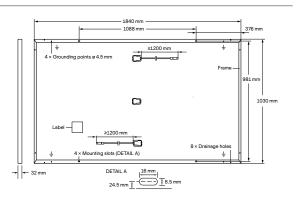
Rooftop arrays on residential buildings



Rooftop arrays on commercial/industrial buildings



 $<sup>^{\</sup>scriptsize 1}$  See data sheet on rear for further information.



#### **ELECTRICAL CHARACTERISTICS**

PO	WER CLASS			375	380	385	390	395
MIN	IIMUM PERFORMANCE AT STANDARD	TEST CONDITIO	NS, STC1 (PC	OWER TOLERANCE	+5W/-0W)			
Minimum	Power at MPP¹	P <sub>MPP</sub>	[W]	375	380	385	390	395
	Short Circuit Current <sup>1</sup>	I <sub>sc</sub>	[A]	10.62	10.65	10.68	10.71	10.74
	Open Circuit Voltage <sup>1</sup>	V <sub>oc</sub>	[V]	44.96	44.99	45.03	45.06	45.10
	Current at MPP	I <sub>MPP</sub>	[A]	10.09	10.14	10.20	10.26	10.32
	Voltage at MPP	$V_{MPP}$	[V]	37.18	37.46	37.74	38.01	38.29
	Efficiency <sup>1</sup>	η	[%]	≥19.8	≥20.1	≥20.3	≥20.6	≥20.8
MIN	IIMUM PERFORMANCE AT NORMAL O	PERATING CONE	DITIONS, NM	IOT <sup>2</sup>				
	Power at MPP	P <sub>MPP</sub>	[W]	280.8	284.6	288.3	292.0	295.8
Minimum	Short Circuit Current	I <sub>sc</sub>	[A]	8.55	8.58	8.60	8.63	8.65
	Open Circuit Voltage	V <sub>oc</sub>	[V]	42.39	42.43	42.46	42.50	42.53
	Current at MPP	I <sub>MPP</sub>	[A]	7.93	7.99	8.04	8.09	8.14
	Voltage at MPP	V <sub>MPP</sub>	[V]	35.39	35.64	35.87	36.11	36.34

 $^{1}\text{Measurement tolerances P}_{\text{MPP}} \pm 3\%; I_{\text{SC}}; V_{\text{OC}} \pm 5\% \text{ at STC}; 1000 \text{W/m}^{2}, 25 \pm 2^{\circ}\text{C}, \text{AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM } 1.5 \text{ according to IEC } 60904 - 3 \cdot ^{2}800 \text{ W/m}^{2$ 

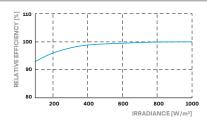
## Q CELLS PERFORMANCE WARRANTY

# RED TO

At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% 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.

## 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 P <sub>MPP</sub>	γ	[%/K]	-0.35	Nominal Module Operating Temperature	NMOT	[°C]	43±3		

# PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V <sub>S</sub>		[V]	1000 PV module classification		Class II
Maximum Reverse Current	I <sub>R</sub>	[A]	20	Fire Rating based on ANSI / UL 61730	C/TYPE 2
Max. Design Load, Push / Pull		[Pa]	3600/2660	Permitted Module Temperature	-40°C - +85°C
Max. Test Load, Push / Pull	-	[Pa]	5400/4000	on Continuous Duty	

#### **QUALIFICATIONS AND CERTIFICATES**

#### PACKAGING INFORMATION

IEC 61215:2016: IEC 61730:2016. This data sheet complies with DIN EN 50380. Certification holder Hanwha Q CELLS Australia Pty Ltd











687.5 kg



28 pallets





24 pallets 33 modules

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.

Vertical

packaging

#### Made in China

#### Hanwha Q CELLS Australia Pty Ltd

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