





Solar Power





Performance Warranty

**QCELLS** 

2018

WINNER

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.2%.



## INNOVATIVE ALL-WEATHER TECHNOLOGY Optimal yields, whatever the weather with excellent

low-light and temperature behaviour.



## Long-term yield security with Anti LID Technology, Anti PID

Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



## EXTREME WEATHER RATING

**ENDURING HIGH PERFORMANCE** 

STATION IAMES COOK UNIVERSITY

High-tech aluminum alloy frame, tested to the extreme in Australia for Australian Conditions at James Cook University Cyclone Testing Station.



#### A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty2.



# STATE OF THE ART MODULE TECHNOLOGY

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

<sup>1</sup> APT test conditions according to IEC/TS 62804-1:2015, method B (-1500 V, 168 h)

<sup>2</sup> See data sheet on rear for further information.

## THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings



Rooftop arrays on commercial/industrial buildings

Engineered in Germany

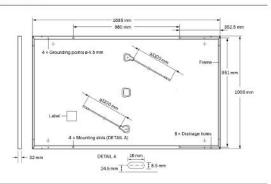






#### MECHANICAL SPECIFICATION

Format	1685mm × 1000mm × 32mm (including frame)		
Weight	18.7kg		
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology		
Back Cover	Composite film		
Frame	Black anodised aluminium		
Cell	6 × 20 monocrystalline Q.ANTUM solar half cells		
Junction box	53-101mm × 32-60mm × 15-18mm Protection class IP67, with bypass diodes		
Cable	4 mm² Solar cable; (+) ≥1100 mm, (-) ≥1100 mm		
Connector	Stäubli MC4; IP68		

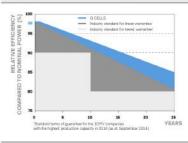


#### **ELECTRICAL CHARACTERISTICS**

WER CLASS			315	320	325	330	335
IIMUM PERFORMANCE AT STANDA	RD TEST CONDITIC	NS, STC1 (PO	WER TOLERANCE	+5W/-0W)			
Power at MPP <sup>1</sup>	P <sub>MPP</sub>	[W]	315	320	325	330	335
Short Circuit Current <sup>1</sup>	I <sub>sc</sub>	[A]	10.04	10.09	10.14	10.20	10.25
Open Circuit Voltage <sup>1</sup>	Voc	[V]	39.87	40.13	40.40	40.66	40.92
Current at MPP	I <sub>MPP</sub>	[A]	9.55	9.60	9.66	9.71	9.76
Voltage at MPP	$V_{MPP}$	[V]	32.98	33.32	33.65	33.98	34.31
Efficiency <sup>1</sup>	η	[%]	≥18.7	≥19.0	≥19.3	≥19.6	≥19.9
IIMUM PERFORMANCE AT NORMA	L OPERATING CONI	DITIONS, NM	OT2				
Power at MPP	P <sub>MPP</sub>	[W]	235.8	239.5	243.2	247.0	250.7
Short Circuit Current	I <sub>SC</sub>	[A]	8.09	8.13	8.17	8.22	8.26
Open Circuit Voltage	Voc	[V]	37.59	37.84	38.09	38.34	38.59
Current at MPP	I <sub>MPP</sub>	[A]	7.52	7.56	7.60	7.64	7.69
Voltage at MPP	V <sub>MPP</sub>	[V]	31.36	31.68	32.00	32.31	32.62
	Power at MPP <sup>1</sup> Short Circuit Current <sup>1</sup> Open Circuit Voltage <sup>1</sup> Current at MPP Voltage at MPP Efficiency <sup>1</sup> BIMUM PERFORMANCE AT NORMA Power at MPP Short Circuit Current Open Circuit Voltage Current at MPP	Nort Circuit Current   Nort Control Control Control Current at MPP   Nort Circuit Current   Nort Current at MPP   Nort Current Control Current   Nort Circuit Current   Nort Circuit Current Control Contro	Note	IMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC1 (POWER TOLERANCE Power at MPP1	Note	Power at MPP¹	Power at MPP¹

Measurement tolerances P<sub>MRP</sub> ±3%; I<sub>SC</sub>; V<sub>GC</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

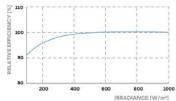
#### Q CELLS PERFORMANCE WARRANTY



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 organisation of your respective country.

# PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25  $^{\circ}$ C, 1000 W/m $^{\circ}$ ).

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>	٧	[%/K]	-0.36	Normal Module Operating Temperature	NMOT	[°C]	43±3

#### PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V <sub>sys</sub>	[V]	1000	Safety Class	li li
Maximum Reverse Current	I <sub>R</sub>	[A]	20	Fire Rating based on ANSI/UL 1703	С
Max. Design Load, Push / Pull		[Pa]	3600/2667	Permitted Module Temperature	-40°C - +85°C
Max Test Load Push / Pull		[Pa]	5400 /4000	on Continuous Duty	

### QUALIFICATIONS AND CERTIFICATES

# VDE Quality Tested, IEC 61215:2016; IEC 61730:2016, Application Class II; This data sheet complies with DIN EN 50380.





Number of Modules per Pallet	32
Number of Pallets per Trailer (24t)	30
Number of Pallets per 40' HC-Container (26t)	26
Pallet Dimensions (L × W × H)	1760 × 1150 × 1190 mm
Pallet Weight	642kg

PACKAGING INFORMATION

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.

## Made in Korea

#### Hanwha Q CELLS Australia Pty Ltd

Suite 1, Level 1, 15 Blue Street, North Sydney, NSW 2060, Australia | TEL +61 (0)2 9016 3033 | FAX +61 (0)2 9016 3032 | EMAIL q-cells-australia@q-cells.com | WEB www.q-cells.com/au

**QCELLS** 

© Q CELLS Q PEAK DUO-G5+\_315-335\_2019-09\_Rev02\_AU