











#### **BREAKING THE 21% EFFICIENCY BARRIER**

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.6%.



# THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY

Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.



# **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, Anti PID Technology $^1$ , Hot-Spot Protect and Traceable Quality Tra.Q $^{\text{TM}}$ .



## **EXTREME WEATHER RATING**

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



#### A RELIABLE INVESTMENT

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

# THE IDEAL SOLUTION FOR:

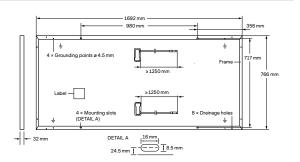




<sup>&</sup>lt;sup>1</sup> APT test conditions according to IEC/TS 62804-1:2015, method A (-1500 V, 96h)

 $<sup>^{\</sup>rm 2}$  See data sheet on rear for further information.

Format	1692 mm × 766 mm × 32 mm (including frame)
Weight	14.8 kg
Front Cover	3.2mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	$4 \times 18$ monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥1250 mm, (-) ≥1250 mm
Connector	Stäubli MC4, Hanwha Q CELLS HQC4; IP68



#### **ELECTRICAL CHARACTERISTICS**

PO	WER CLASS			260	265	270	275	
MIN	MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5 W / -0 W)							
Minimum	Power at MPP¹	P <sub>MPP</sub>	[W]	260	265	270	275	
	Short Circuit Current <sup>1</sup>	I <sub>sc</sub>	[A]	13.47	13.53	13.58	13.64	
	Open Circuit Voltage <sup>1</sup>	V <sub>oc</sub>	[V]	24.75	24.78	24.81	24.83	
	Current at MPP	I <sub>MPP</sub>	[A]	12.78	12.88	12.99	13.09	
	Voltage at MPP	$V_{MPP}$	[V]	20.35	20.57	20.79	21.00	
	Efficiency <sup>1</sup>	η	[%]	≥20.1	≥20.4	≥20.8	≥21.2	
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>								
	Power at MPP	P <sub>MPP</sub>	[W]	195.1	198.8	202.6	206.3	
Minimum	Short Circuit Current	I <sub>sc</sub>	[A]	10.85	10.90	10.94	10.99	
	Open Circuit Voltage	Voc	[V]	23.34	23.37	23.39	23.42	
	Current at MPP	I <sub>MPP</sub>	[A]	10.05	10.14	10.23	10.33	
	Voltage at MPP	V <sub>MPP</sub>	[V]	19.41	19.60	19.79	19.98	

 $^1\text{Measurement tolerances P}_{\text{MPP}}\pm3\%; I_{\text{SC}}; V_{\text{OC}}\pm5\% \text{ at STC}; \overline{1000\text{W/m}^2, 25\pm2\text{°C}, \text{AM 1.5 according to IEC 60904-3}} + 2800\text{W/m}^2, \text{NMOT, spectrum AM 1.5}$ 

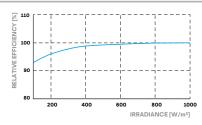
### Q CELLS PERFORMANCE WARRANTY

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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  $^{\circ}$ C, 1000W/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]	-0.34	Nominal Module Operating Temperature	NMOT	[°C]	43±3

## PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	$V_{SYS}$	[V]	1000	PV module classification	Class II
Maximum Reverse Current	I <sub>R</sub>	[A]	25	Fire Rating based on ANSI/UL 61730	C/TYPE 2
Max. Design Load, Push / Pull		[Pa]	2660/2660	Permitted Module Temperature	-40°C - +85°C
Max. Test Load, Push / Pull		[Pa]	4000/4000	on Continuous Duty	

# **QUALIFICATIONS AND CERTIFICATES**

Quality Controlled PV - TÜV Rheinland; IEC 61215:2016; IEC 61730:2016. This data sheet complies with DIN EN 50380.



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**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 GmbH

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