

ENDURING HIGH PERFORMANCE











Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.8%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

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



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



A RELIABLE INVESTMENT

Inclusive 12-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 12-busbar design with Q.ANTUM Technology.

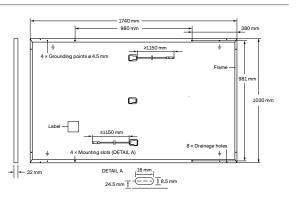
THE IDEAL SOLUTION FOR:





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

² See data sheet on rear for further information.



ELECTRICAL CHARACTERISTICS

PO	WER CLASS			335	340	345	350
MIN	IIMUM PERFORMANCE AT STANDAF	RD TEST CONDITIO	NS, STC¹ (PO	WER TOLERANCE +5W/	-0 W)		
Minimum	Power at MPP ¹	P _{MPP}	[W]	335	340	345	350
	Short Circuit Current ¹	I _{sc}	[A]	10.34	10.40	10.45	10.51
	Open Circuit Voltage ¹	V _{oc}	[V]	40.44	40.70	40.95	41.21
	Current at MPP	I _{MPP}	[A]	9.85	9.90	9.96	10.01
	Voltage at MPP	V_{MPP}	[V]	34.01	34.34	34.65	34.97
	Efficiency ¹	η	[%]	≥18.7	≥19.0	≥19.3	≥19.5
MIN	IIMUM PERFORMANCE AT NORMAL	OPERATING CONE	OITIONS, NM	OT ²			
Minimum	Power at MPP	P _{MPP}	[W]	250.9	254.6	258.4	262.1
	Short Circuit Current	I _{sc}	[A]	8.33	8.38	8.42	8.47
	Open Circuit Voltage	Voc	[V]	38.13	38.38	38.62	38.86
	Current at MPP	I _{MPP}	[A]	7.75	7.79	7.84	7.88
	Voltage at MPP	V _{MPP}	[V]	32.36	32.67	32.97	33.27

 $^1\text{Measurement tolerances P}_{\text{MPP}} \pm 3\%; |_{\text{Sc}}; |_{\text{CC}} \pm 5\% \text{ at STC}; |_{\text{1000W/m}^2, 25 \pm 2^{\circ}\text{C}, \text{AM 1.5 according to IEC 60904-3}} \pm 2800\text{W/m}^2, \text{NMOT, spectrum AM 1.5}}$

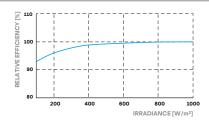
Q CELLS PERFORMANCE WARRANTY

Q CELLS 98 96 Includy standard for linear warrardies* Includy standard for linear w

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 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of Voc	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.35	Normal Module Operating Temperature	NMOT	[°C]	43±3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage		[V]	1000 (IEC)/1000 (UL)	Safety Class	II	
Maximum Reverse Current	I _R	[A]	20	Fire Rating based on ANSI/UL 1703	C (IEC)/TYPE 2 (UL)	
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

PACKAGING INFORMATION

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)	28
	Number of Pallets per 40' HC-Container (26t)	24
_	Pallet Dimensions (L × W × H)	1815 × 1150 × 1220 mm
	Pallet Weight	683 kg

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

Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | TEL +49 (0)3494 66 99-23444 | FAX +49 (0)3494 66 99-23000 | EMAIL sales@q-cells.com | WEB www.q-cells.com