



STATE OF THE ART MODULE TECHNOLOGY

 $\ensuremath{\mathsf{Q.ANTUM}}$ DUO combines cutting edge cell separation and innovative wiring with $\ensuremath{\mathsf{Q.ANTUM}}$ Technology.

- $^{\rm 1}$ APT test conditions according to IEC/TS 62804-1:2015, method B (–1500 V, 168 h)
- $^{\rm 2}$ See data sheet on rear for further information.

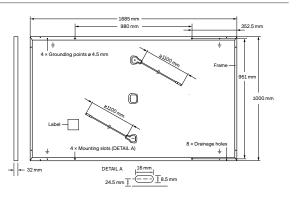
THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings







ELECTRICAL CHARACTERISTICS

PO	WER CLASS			325	330	335
MIN	IIMUM PERFORMANCE AT STANDAF	D TEST CONDITIO	NS, STC¹ (POWE	ER TOLERANCE +5 W / -0 W)		
Minimum	Power at MPP¹	P _{MPP}	[W]	325	330	335
	Short Circuit Current ¹	I _{sc}	[A]	10.10	10.15	10.21
	Open Circuit Voltage ¹	Voc	[V]	40.36	40.62	40.89
	Current at MPP	I _{MPP}	[A]	9.61	9.67	9.72
	Voltage at MPP	V_{MPP}	[V]	33.81	34.14	34.47
	Efficiency ¹	η	[%]	≥19.3	≥19.6	≥19.9
MIN	IIMUM PERFORMANCE AT NORMAL	OPERATING COND	DITIONS, NMOT	2		
	Power at MPP	P _{MPP}	[W]	243.4	247.1	250.9
Minimum	Short Circuit Current	I _{sc}	[A]	8.14	8.18	8.22
	Open Circuit Voltage	V _{oc}	[V]	38.06	38.31	38.55
	Current at MPP	I _{MPP}	[A]	7.57	7.61	7.65
	Voltage at MPP	V _{MPP}	[V]	32.17	32.48	32.79

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

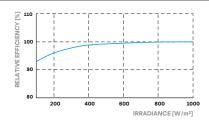
Q CELLS PERFORMANCE WARRANTY

N I DO BY Standard terms of guarantee for the 10 PV companies with the highest production specify not 15 go (see 15 Spenner 2014)

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 V _{oc}	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.35	Nominal Module Operating Temperature	NMOT	[°C]	43±3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V _{SYS}	[V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Reverse Current	I _R	[A]	20	Fire Rating based on ANSI / UL 1703	C/TYPE 2
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; 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)	1745 × 1130 × 1170 mm
Pallet Weight	639 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.

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