

powered by

Q.ANTUM DUO Z

Q.PEAK DUO XL-G10.c

475-495

ENDURING HIGH
PERFORMANCE



BREAKING THE 21% EFFICIENCY BARRIER

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



LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area, lower BOS costs and up to 80 watts more module power than standard 144 half-cell modules.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400Pa) and wind loads (3000Pa).



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 wiring with Q.ANTUM Technology.

¹ APT test conditions according to IEC/TS 62804-1:2015, method A (-1500V, 96h)

² See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



Ground-mounted
solar power plants

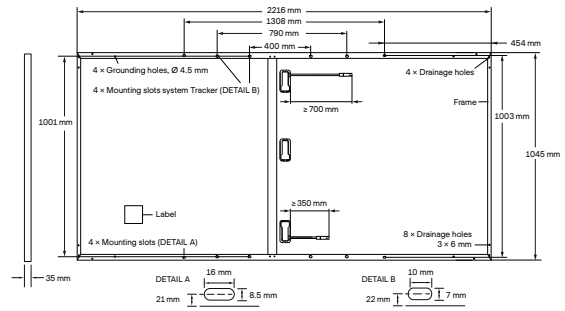
Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	2216 mm × 1045 mm × 35 mm (including frame)
Weight	26.5 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodised aluminium
Cell	6 × 26 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 mm ² Solar cable; (+) ≥ 700 mm, (-) ≥ 350 mm*
Connector	Stäubli MC4-Evo2, Hanwha Q CELLS HQC4; IP68

*Long cables (+) ≥ 1450 mm, (-) ≥ 1450 mm for landscape installation are available upon request.



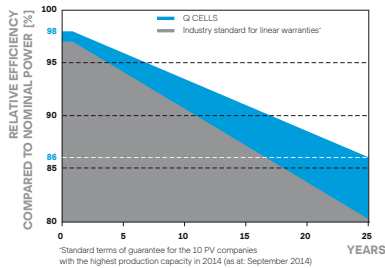
Drawing not to scale

ELECTRICAL CHARACTERISTICS

POWER CLASS		475	480	485	490	495	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)							
Minimum	Power at MPP ¹	P_{MPP} [W]	475	480	485	490	495
	Short Circuit Current ¹	I_{SC} [A]	11.24	11.26	11.29	11.31	11.34
	Open Circuit Voltage ¹	V_{OC} [V]	53.58	53.61	53.64	53.68	53.71
	Current at MPP	I_{MPP} [A]	10.66	10.71	10.76	10.81	10.86
	Voltage at MPP	V_{MPP} [V]	44.54	44.81	45.07	45.33	45.59
	Efficiency ¹	η [%]	≥ 20.5	≥ 20.7	≥ 20.9	≥ 21.2	≥ 21.4
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²							
Minimum	Power at MPP	P_{MPP} [W]	356.4	360.1	363.9	367.6	371.4
	Short Circuit Current	I_{SC} [A]	9.05	9.07	9.09	9.12	9.14
	Open Circuit Voltage	V_{OC} [V]	50.53	50.56	50.59	50.62	50.65
	Current at MPP	I_{MPP} [A]	8.39	8.43	8.47	8.52	8.56
	Voltage at MPP	V_{MPP} [V]	42.49	42.72	42.94	43.17	43.39

¹Measurement tolerances $P_{MPP} \pm 3\%$; I_{SC} ; $V_{OC} \pm 5\%$ 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

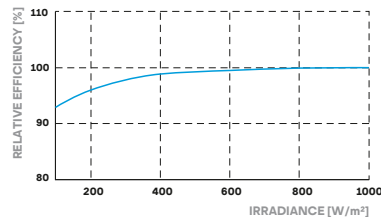


¹Standard terms of guarantee for the 10 PV companies with the highest production capacity in 2014 (as at September 2014)

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_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ [%/K]	-0.34	Nominal Module Operating Temperature	NMOT [°C]	43 ± 3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS} [V]	1500	PV module classification	Class II
Maximum Reverse Current	I_R [A]	20	Fire Rating based on ANSI / UL 61730	C / TYPE 1
Max. Design Load, Push / Pull	[Pa]	3600 / 2000	Permitted Module Temperature on Continuous Duty	-40°C - +85°C
Max. Test Load, Push / Pull	[Pa]	5400 / 3000		

QUALIFICATIONS AND CERTIFICATES

IEC 61215:2016;
IEC 61730:2016.
This data sheet complies with DIN EN 50380.

Certification in process.



PACKAGING INFORMATION

Horizontal packaging	2270 mm	1100 mm	1210 mm	821 kg	22 pallets	20 pallets	29 modules
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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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