

powered by

Q.ANTUM DUO Z

Q.PEAK DUO XL-G10.2

470-495

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 aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (3000 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.

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

² See data sheet on rear for further information.



6 BUSBAR
CELL TECHNOLOGY



12 BUSBAR
CELL TECHNOLOGY

THE IDEAL SOLUTION FOR:



Ground-mounted
solar power plants

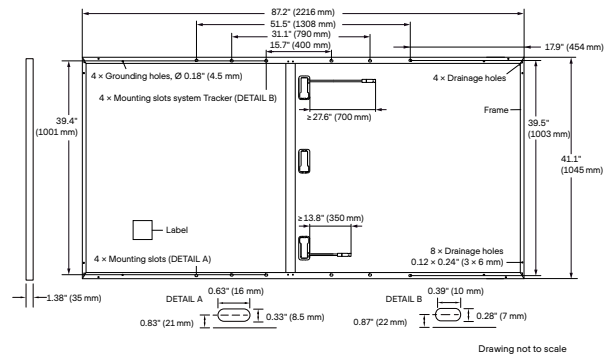
Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	87.2in × 41.1in × 1.38in (including frame) (2216mm × 1045mm × 35mm)
Weight	58.4lbs (26.5kg)
Front Cover	0.13in (3.2mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodized aluminum
Cell	6 × 26 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98in × 1.26-2.36in × 0.59-0.71in (53-101mm × 32-60mm × 15-18mm), IP67, with bypass diodes
Cable	4mm ² Solar cable; (+) ≥27.6in (700mm), (-) ≥13.8in (350mm)*
Connector	Stäubli MC4, Stäubli MC4-Evo2, Hanwha Q CELLS HQC4; IP68

*Long cables (+) ≥57.1in (1450mm), (-) ≥57.1in (1450mm) for landscape installation are available upon request.

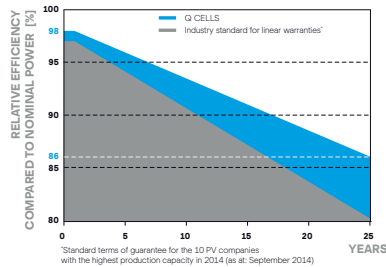


ELECTRICAL CHARACTERISTICS

POWER CLASS		470	475	480	485	490	495	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5W / -0W)								
Minimum	Power at MPP ¹	P _{MPP} [W]	470	475	480	485	490	495
	Short Circuit Current ¹	I _{SC} [A]	11.21	11.24	11.26	11.29	11.31	11.34
	Open Circuit Voltage ¹	V _{OC} [V]	53.54	53.58	53.61	53.64	53.68	53.71
	Current at MPP	I _{MPP} [A]	10.62	10.66	10.71	10.76	10.81	10.86
	Voltage at MPP	V _{MPP} [V]	44.27	44.54	44.81	45.07	45.33	45.59
	Efficiency ¹	η [%]	≥20.3	≥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]	352.6	356.4	360.1	363.9	367.6	371.4
	Short Circuit Current	I _{SC} [A]	9.03	9.05	9.07	9.09	9.12	9.14
	Open Circuit Voltage	V _{OC} [V]	50.49	50.53	50.56	50.59	50.62	50.65
	Current at MPP	I _{MPP} [A]	8.34	8.39	8.43	8.47	8.52	8.56
	Voltage at MPP	V _{MPP} [V]	42.26	42.49	42.72	42.94	43.17	43.39

¹Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000W/m², 25±2°C, AM 1.5 according to IEC 60904-3 • *800W/m², NMOT, spectrum AM 1.5

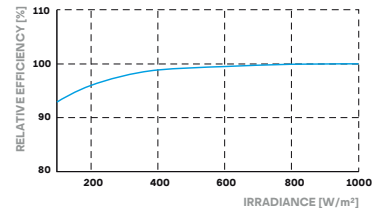
Q CELLS PERFORMANCE WARRANTY



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, 1000W/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 [°F]	109±5.4 (43±3°C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1500 (IEC)/1500 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 1
Max. Design Load, Push / Pull ³	[lbs/ft ²]	75 (3600 Pa) / 42 (2000 Pa)	Permitted Module Temperature on Continuous Duty	-40°F up to +185°F (-40°C up to +85°C)
Max. Test Load, Push / Pull ³	[lbs/ft ²]	113 (5400 Pa) / 63 (3000 Pa)		

³ See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 61730, CE-compliant,
IEC 61215:2016,
IEC 61730:2016,
U.S. Patent No. 9,893,215
(solar cells);



PACKAGING INFORMATION

Horizontal packaging	89.4in 2270mm	43.3in 1100mm	47.6in 1210mm	1809lbs 821kg	22 pallets	20 pallets	29 modules

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 America Inc.

400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL inquiry@us.q-cells.com | WEB www.q-cells.us