powered by Q.ANTUM DUO Z

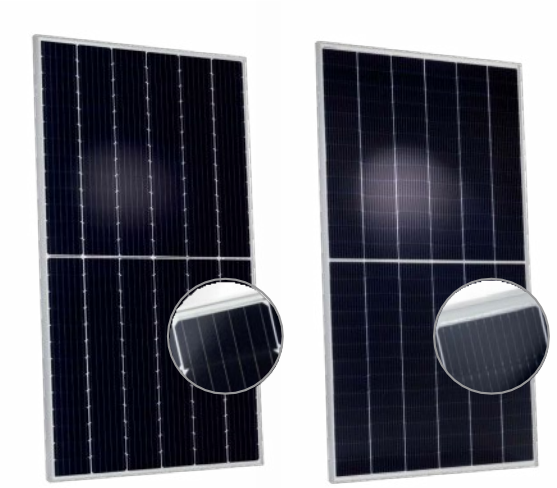
Q.PEAK DUO XL-G10.2

470-495

ENDURING HIGH PERFORMANCE

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2021

Q CELLS Yield Security



6 BUSBAR CELL TECHNOLOGY

12 BUSBAR CELL TECHNOLOGY

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 Technology[1], 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 warranty[2].

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 (−1500 V, 96 h)

[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

Ground-mounted solar power plants

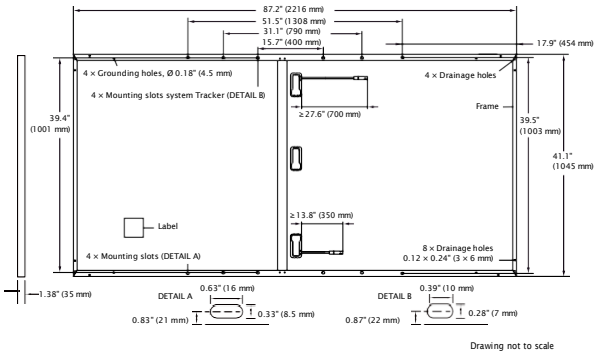
Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	87.2 in × 41.1 in × 1.38 in (including frame) (2216 mm × 1045 mm × 35 mm)
Weight	58.4 lbs (26.5 kg)
Front Cover	0.13 in (3.2 mm) 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	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 27.6 in (700 mm), (−) ≥ 13.8 in (350 mm)*
Connector	Stäubli MC4, Stäubli MC4-Evo2, Hanwha Q CELLS HQC4; IP68

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



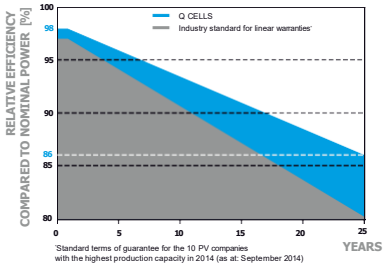
Drawing not to scale

ELECTRICAL CHARACTERISTICS

POWER CLASS				470	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]	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

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

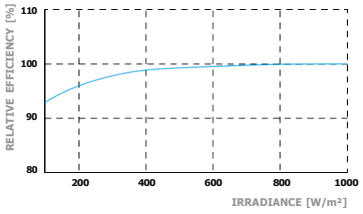
Q CELLS PERFORMANCE WARRANTY



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, 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	[°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/ft²]	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/ft²]	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);

C SP US Certified UL 61730

CE

TÜVRheinland CERTIFIED www.tuv.com ID 1111220277

PACKAGING INFORMATION

Horizontal packaging	89.4 in 2270 mm	43.3 in 1100 mm	47.6 in 1210 mm	1809 lbs 821 kg	22 pallets	20 pallets	30 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.

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