powered by Q.ANTUM DUO Z



Q.PEAK DUO XL-G10.2
470-490

ENDURING HIGH PERFORMANCE

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2021

Q CELLS Yield Security



BREAKING THE 21% EFFICIENCY BARRIER
Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.4%.

LOW ELECTRICITY GENERATION COSTS
Higher yield per surface area, lower BOS costs and up to 75 watts more module power than standard 144 half-cell modules.

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

EXTREME WEATHER RATING
High-tech aluminium 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[1].

STATE OF THE ART MODULE TECHNOLOGY
Q.ANTUM DUO combines cutting edge cell separation and innovative 12-busbar design with Q.ANTUM Technology.

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

THE IDEAL SOLUTION FOR:
Ground-mounted solar power plants

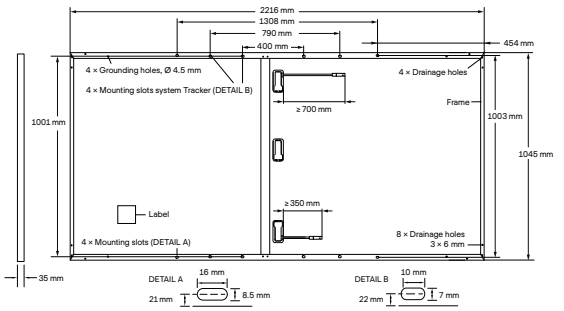
Engineered in Germany

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 mm² 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.



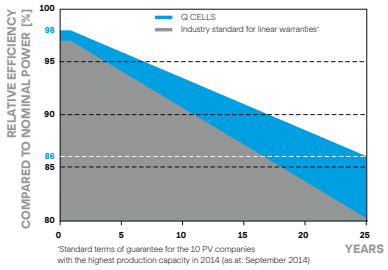
Drawing not to scale

ELECTRICAL CHARACTERISTICS

POWER CLASS				475	480	485	490
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
	Short Circuit Current[1]	I_{SC}	[A]	11.24	11.26	11.29	11.31
	Open Circuit Voltage[1]	V_{OC}	[V]	53.58	53.61	53.64	53.68
	Current at MPP	I_{MPP}	[A]	10.66	10.71	10.76	10.81
	Voltage at MPP	V_{MPP}	[V]	44.54	44.81	45.07	45.33
	Efficiency[1]	η	[%]	≥ 20.5	≥ 20.7	≥ 20.9	≥ 21.2
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]							
Minimum	Power at MPP	P_{MPP}	[W]	356.4	360.1	363.9	367.6
	Short Circuit Current	I_{SC}	[A]	9.05	9.07	9.09	9.12
	Open Circuit Voltage	V_{OC}	[V]	50.53	50.56	50.59	50.62
	Current at MPP	I_{MPP}	[A]	8.39	8.43	8.47	8.52
	Voltage at MPP	V_{MPP}	[V]	42.49	42.72	42.94	43.17

[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

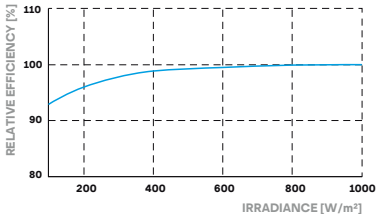
Q CELLS PERFORMANCE WARRANTY



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	[°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.

TÜVRheinland CERTIFIED
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ID 1111220277

CE

PACKAGING INFORMATION

Vertical packaging	2306mm	1150mm	1215mm	835kg	12 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.

Made in Malaysia

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Engineered in Germany

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