powered by Q.ANTUM DUO Z

Q.PEAK DUO XL-G9.2

445-465

ENDURING HIGH PERFORMANCE

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2020

Q CELLS Yield Security

BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.1%.

LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area, lower BOS costs and up to 30 watts more power per module.

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 (2400 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 B (–1500 V, 168 h)
[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

Ground-mounted solar power plants

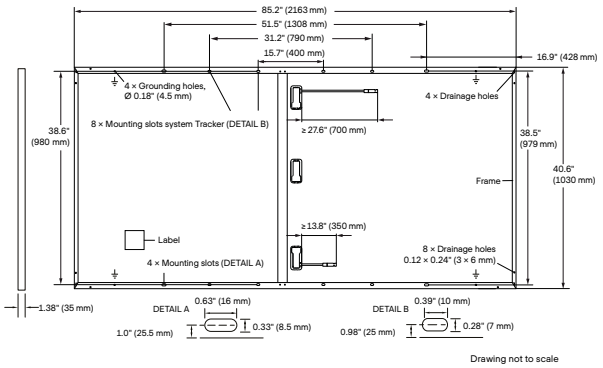
Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	85.2 in × 40.6 in × 1.38 in (including frame) (2163 mm × 1030 mm × 35 mm)
Weight	57.3 lbs (26.0 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-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.



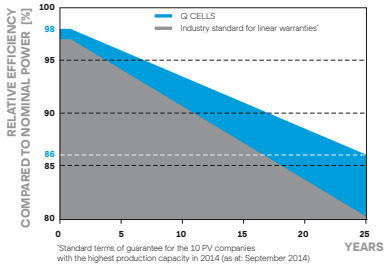
Drawing not to scale

ELECTRICAL CHARACTERISTICS

POWER CLASS				445	450	455	460	465
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / –0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	445	450	455	460	465
	Short Circuit Current[1]	I_{SC}	[A]	10.62	10.65	10.67	10.70	10.73
	Open Circuit Voltage[1]	V_{OC}	[V]	53.15	53.18	53.22	53.25	53.29
	Current at MPP	I_{MPP}	[A]	10.10	10.15	10.20	10.25	10.30
	Voltage at MPP	V_{MPP}	[V]	44.06	44.34	44.61	44.89	45.16
	Efficiency[1]	η	[%]	≥20.0	≥20.2	≥20.4	≥20.6	≥20.9
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	333.2	337.0	340.7	344.5	348.2
	Short Circuit Current	I_{SC}	[A]	8.56	8.58	8.60	8.62	8.64
	Open Circuit Voltage	V_{OC}	[V]	50.12	50.15	50.18	50.22	50.25
	Current at MPP	I_{MPP}	[A]	7.95	7.99	8.03	8.08	8.12
	Voltage at MPP	V_{MPP}	[V]	41.93	42.17	42.41	42.64	42.87

[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

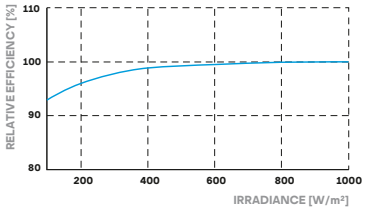
Q CELLS PERFORMANCE WARRANTY



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]	–0.35	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) / 33 (1600 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) / 50 (2400 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 Certified US
UL 61730

CE

TÜVRheinland CERTIFIED
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ID 1111220277

PACKAGING AND TRANSPORT INFORMATION

Horizontal packaging	87.8 in 2230 mm	42.5 in 1080 mm	47.1 in 1196 mm	1755 lbs 796 kg	24 pallets	22 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.

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