powered by Q.ANTUM DUO

Q.PEAK DUO L-G8.2

420-435

ENDURING HIGH PERFORMANCE

pv magazine award 2017 top innovation

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2020

Photon Q.PRO-G2 235 Best polycrystalline solar module 2014 Q CELLS 174 modules tested

Q CELLS Yield Security

Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY
Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.5%.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behaviour.

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 aluminium 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:

Rooftop arrays on commercial / industrial buildings

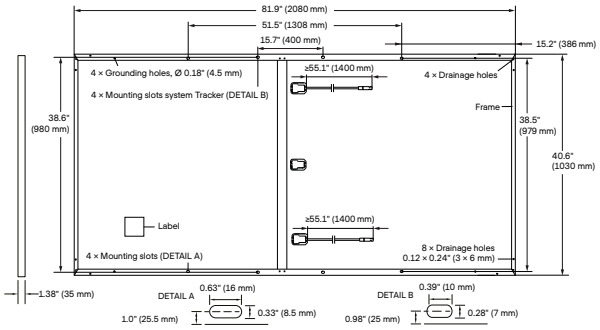
Ground-mounted solar power plants

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	81.9 in × 40.6 in × 1.38 in (including frame) (2080 mm × 1030 mm × 35 mm)
Weight	55.1 lbs (25.0 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 × 24 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; (+) ≥55.1 in (1400 mm), (–) ≥55.1 in (1400 mm)
Connector	Stäubli MC4-Evo2, Hanwha Q CELLS HQC4, Amphenol UTX, Renhe 05-8, JMTHY JM601A, Tongling Cable01S-F; IP68 or Friends PV2e; IP67

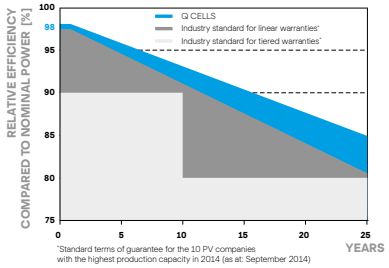


ELECTRICAL CHARACTERISTICS

POWER CLASS				420	425	430	435
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / –0 W)							
Minimum	Power at MPP[1]	P_{MPP}	[W]	420	425	430	435
	Short Circuit Current[1]	I_{SC}	[A]	10.74	10.78	10.83	10.87
	Open Circuit Voltage[1]	V_{OC}	[V]	48.84	49.09	49.33	49.58
	Current at MPP	I_{MPP}	[A]	10.22	10.27	10.31	10.36
	Voltage at MPP	V_{MPP}	[V]	41.08	41.39	41.70	42.00
	Efficiency[1]	η	[%]	≥19.6	≥19.8	≥20.1	≥20.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]							
Minimum	Power at MPP	P_{MPP}	[W]	314.5	318.3	322.0	325.8
	Short Circuit Current	I_{SC}	[A]	8.65	8.69	8.72	8.76
	Open Circuit Voltage	V_{OC}	[V]	46.05	46.29	46.52	46.76
	Current at MPP	I_{MPP}	[A]	8.05	8.08	8.12	8.15
	Voltage at MPP	V_{MPP}	[V]	39.09	39.38	39.67	39.96

[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

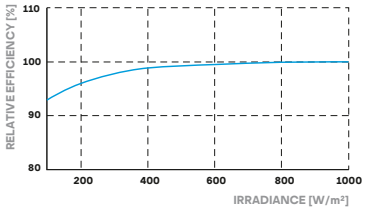
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 93.1% of nominal power up to 10 years. At least 85% 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)		

[4] 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

TÜVRheinland CERTIFIED
www.tuv.com
ID 1111220277

PACKAGING AND TRANSPORT INFORMATION

Horizontal packaging	83.9 in 2130 mm	42.5 in 1080 mm	47.1 in 1196 mm	1687 lbs 765 kg	24 pallets	22 pallets	29 modules
Vertical packaging	84.6 in 2150 mm	45.3 in 1150 mm	47.2 in 1200 mm	1764 lbs 800 kg	24 pallets	22 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. Q CELLS supplies solar modules in two different stacking methods, depending on the location of manufacture (modules are packed horizontally or vertically). You can find more detailed information in the document "Packaging and Transport Information", available from Q CELLS.

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