Q.TRON BLK M-G2+ SERIES

410 - 450 Wp | 108 Cells
22.5 % Maximum Module Efficiency
Domestic Content Option Available

MODEL Q.TRON BLK M-G2+, Q.TRON BLK M-G2.C+, Q.TRON BLK M-G2.F+, Q.TRON BLK M-G2.H+

Includes Domestic Content

Q.TRON BLK M-G2.X+ solar modules ("X" can be "C, F, H") contain U.S. manufactured components which can contribute to qualifying for the 10 % domestic content bonus to applicable tax credits under the Inflation Reduction Act of 2022.[1]

High performance Qcells N-type solar cells

Q.ANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.5 %.

A reliable investment

Inclusive 25-year product warranty and 25-year linear performance warranty.[2]

Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology[3], Hot-Spot Protect.

Extreme weather rating

High-tech aluminum alloy frame, certified for high snow (8100 Pa) and wind loads (3600 Pa).

Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.

Far beyond the standard

Qcells' comprehensive quality program ensures high long-term yields and the reliability of your solar system.

[1] This statement should not be relied on as tax advice and is subject to change based on changes made to the Inflation Reduction Act and its implementing rules and regulations. Please consult a qualified tax professional for specific guidance.

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

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

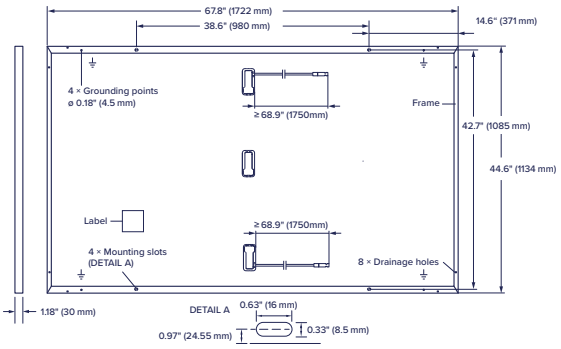
The ideal solution for:

Rooftop arrays on residential buildings

Q.TRON BLK M-G2+ SERIES

Mechanical Specification

Format	67.8 in × 44.6 in × 1.18 in (including frame) (1722 mm × 1134 mm × 30 mm)
Weight	46.7 lbs (21.2 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 18 monocrystalline Q.ANTUM NEO 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), Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥68.9 in (1750mm), (−) ≥68.9 in (1750mm)
Connector	Stäubli MC4; IP68

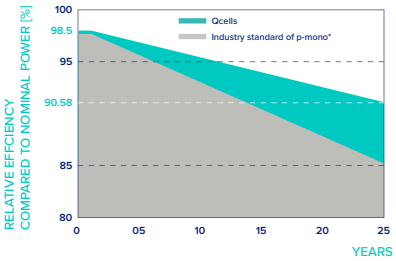


Electrical Characteristics

Power Class				410	415	420	425	430	435	440	445	450
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)												
Minimum	Power at MPP[1]	P_{MPP}	[W]	410	415	420	425	430	435	440	445	450
	Short Circuit Current[1]	I_{SC}	[A]	13.41	13.49	13.58	13.66	13.74	13.82	13.90	13.98	14.07
	Open Circuit Voltage[1]	V_{OC}	[V]	38.19	38.47	38.75	39.03	39.32	39.60	39.88	40.16	40.44
	Current at MPP	I_{MPP}	[A]	12.76	12.83	12.91	12.98	13.05	13.13	13.20	13.27	13.35
	Voltage at MPP	V_{MPP}	[V]	32.13	32.34	32.54	32.74	32.94	33.14	33.33	33.52	33.71
	Efficiency[1]	η	[%]	≥21.0	≥21.3	≥21.5	≥21.8	≥22.0	≥22.3	≥22.5	≥22.8	≥23.0
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]												
Minimum	Power at MPP	P_{MPP}	[W]	309.9	313.7	317.5	321.2	325.0	328.8	332.6	336.4	340.1
	Short Circuit Current	I_{SC}	[A]	10.81	10.87	10.94	11.00	11.07	11.14	11.20	11.27	11.33
	Open Circuit Voltage	V_{OC}	[V]	36.23	36.50	36.77	37.04	37.31	37.58	37.84	38.11	38.38
	Current at MPP	I_{MPP}	[A]	10.04	10.10	10.15	10.21	10.27	10.33	10.38	10.44	10.50
	Voltage at MPP	V_{MPP}	[V]	30.87	31.07	31.26	31.46	31.65	31.84	32.03	32.22	32.41

[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

Qcells Performance Warranty

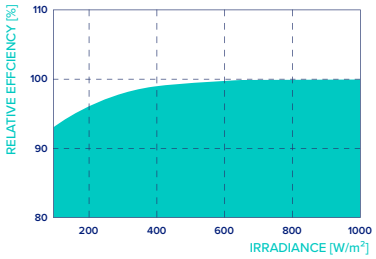


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 90.58% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organization of your respective country.

*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

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]	−0.24
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.30	Nominal Module Operating Temperature	NMOT	[°F]	109±5.4 (43±3 °C)

Properties for System Design

Maximum System Voltage	V_{SYS}	[V]	1000 (IEC) / 1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	25	Fire Rating based on ANSI / UL 61730	C / TYPE 2
Max. Design Load, Push / Pull[3]		[lbs / ft²]	113 (5400 Pa) / 50 (2400 Pa)	Permitted Module Temperature on Continuous Duty	−40 °F up to +158 °F (−40 °C up to +70 °C)
Max. Test Load, Push / Pull[3]		[lbs / ft²]	169 (8100 Pa) / 75 (3600 Pa)		

[3] See Installation Manual

Qualifications and Certificates

UL61730-1 & UL61730-2,
CE-compliant, IEC 61215:2021,
IEC 61730:2023,

Find product recycling details at QR code above

*Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.

Hanwha Q CELLS America Inc. 300 Spectrum Center Drive, Suite 500, Irvine, CA 92618, USA | TEL +1 (949) 748-5996 | EMAIL na.support@qcells.com | WEB www.qcells.com/us