Solar Simplified.

qcells





Q.TRON AC

Q.TRON BLK M-G2+/AC
Q.TRON BLK M-G2.C1+/AC
Q.TRON BLK M-G2.H1+/AC
Q.TRON BLK M-G2.XY+/AC

Q.TRON AC

AC module powered by
Q.ANTUM NEO Technology

Monitoring and Control

- The Q.OMMAND PRO App enables installers to monitor system performance at the module level, while the user-friendly Q.OMMAND HOME App provides homeowners with real-time PV production insights.

Streamlined Installation and Product Management

- Fast installation enabled by integrated Qcells microinverter
- Improved inventory management enabled by reduced SKU counts and one complete module and MLPE solution
- Seamlessly couples with Qcells' residential energy storage system to form one complete Q.HOME SMART system

Superior Module Performance

- Q.TRON AC is powered by Q.ANTUM NEO Technology, boosting module efficiency up to 22.5 % which results in more power production over time.

Top Quality Customer Support

- While the detachable microinverter simplifies on-site maintenance, Qcells' first-class customer support offers rapid system troubleshooting.

Dependably Backed by One Warrantor

- 25-year product and performance warranty with an integrated module and microinverter solution from Qcells.

Includes Domestic Content

- Q.TRON BLK M-G2.XY+/AC contains U.S. manufactured components which can contribute to qualifying for the 10 % domestic content bonus for applicable investment and production tax credits.[1]
- Module and microinverter both assembled in the USA by America's No.1 residential module manufacturer

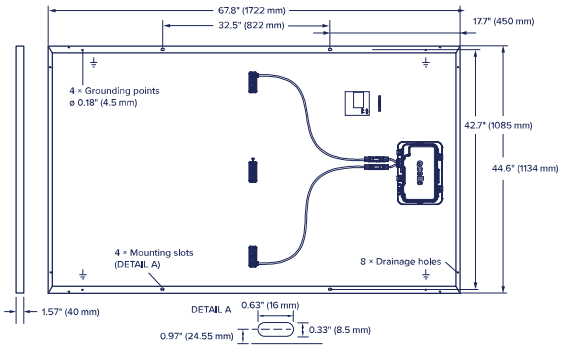
[1] This statement should not be relied on as tax advice and is subject to change based on changes made to the applicable rules and regulations. Please consult a qualified tax professional for specific guidance.

Description

The Q.TRON AC SERIES is a N-type TOPCon PV module with an integrated microinverter. The module, with its embedded microinverter, provides optimized power output while also acting as a rapid shutdown compliant solution for optimal system safety. The solution includes a microinverter, DC cables and a junction box, enabling a streamlined installation experience.

Mechanical Specification

Format	67.8 in × 44.6 in × 1.57 in (including frame) (1722 mm × 1134 mm × 40 mm)
Weight	50.59 lbs (22.95 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed ARC solar glass
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 IP68, with bypass diodes
Microinverter	9.61 in × 5.79 in × 1.17 in (244 mm × 147 mm × 29.6 mm), Protection class IP67 / NEMA Type 6
DC Cable	4 mm² Solar cable; (+) ≥ 25.8 in (655 mm), (–) ≥ 25.2 in (640 mm)
DC Connector	Stäubli MC4; IP68



AC Output Electrical Characteristics

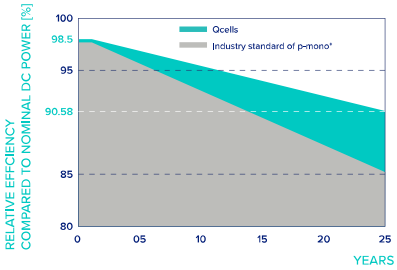
Q.MI.349B-G1 (Model Name)					
Peak Output Power	[VA]	366	**Power Factor (adjustable)**		0.85 leading...0.85 lagging
Max Continuous Output Power	[VA]	349	**Max. number of AC Modules per Q.HOME COMBINER 80 G1**	[ea]	44 (Q.HOME COMBINER CB : Max 4)
Nominal (L-L) Voltage / Range	[V]	240 / 211 to 264	**Max Units per 20 A (L-L) Branch Circuit**	[ea]	11
Nominal Rated Output Current	[A]	1.45	**Total Harmonic Distortion**	[%]	<5
Nominal Frequency / Range	[Hz]	60 / 59.3 to 60.5	**Overvoltage Class AC Port**		III
Extended Frequency Range	[Hz]	50 to 66	**Night-Time Power Consumption**	[mW]	60
Power Factor at Rated Power		1.0	**CEC Efficiency**	[%]	97

DC Power Electrical Characteristics

Power Class				420	425	430	435	440
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	440
	Short Circuit Current[1]	I_{SC}	[A]	13.58	13.66	13.74	13.82	13.90
	Open Circuit Voltage[1]	V_{OC}	[V]	38.75	39.03	39.32	39.60	39.88
	Current at MPP	I_{MPP}	[A]	12.91	12.98	13.05	13.13	13.20
	Voltage at MPP	V_{MPP}	[V]	32.54	32.74	32.94	33.14	33.33
	Efficiency[1]	η	[%]	≥ 21.5	≥ 21.8	≥ 22.0	≥ 22.3	≥ 22.5
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	**Power at MPP**	P_{MPP}	[W]	318.2	322.0	325.8	329.5	333.3
	Short Circuit Current	I_{SC}	[A]	10.94	11.00	11.07	11.14	11.20
	Open Circuit Voltage	V_{OC}	[V]	36.77	37.04	37.31	37.58	37.84
	Current at MPP	I_{MPP}	[A]	10.15	10.21	10.27	10.33	10.38
	Voltage at MPP	V_{MPP}	[V]	31.33	31.53	31.72	31.92	32.11

[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

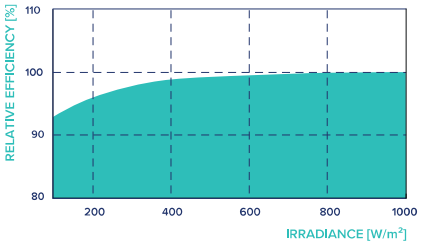


At least 98.5 % of nominal DC power during first year. Thereafter max. 0.33 % degradation per year. At least 95.53 % of nominal DC power up to 10 years. At least 90.58 % of nominal DC power up to 25 years.

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]	−0.29	**Nominal Module Operating Temperature**	NMOT	[°F]	109 ± 5.4 (43 ± 3 °C)

Properties for System Design

Maximum System Voltage	V_{SYS}	[V]	1000	**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) / 75 (3600 Pa)	**Permitted Module Temperature on Continuous Duty[2]**	−40 °F up to +140 °F (−40 °C up to +60 °C)
Max. Test Load, Push / Pull[3]		[lbs / ft²]	169 (8100 Pa) / 113 (5400 Pa)	**Storage Temperature Range[2]**	−4 °F up to +113 °F (−20 °C up to +45 °C)

[2] According to the Q.MI.349B-G1, the maximum temperature is stated as "60 °C (+140 °F)", but the maximum temperature of the connected DC module is up to "+158 °F (+70 °C)".
[3] See Installation Manual

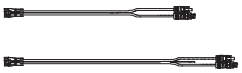
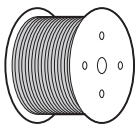
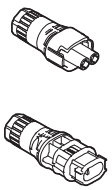
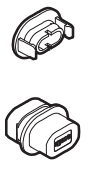
Qualifications and Certificates

Base DC module (Q.TRON BLK M-G2.Y+ solar module series, where "Y" can be any letter between A to W.)
UL 61730-1 & UL 61730-2, CE-compliant;
IEC 61215:2021; IEC 61730:2023.

Qcells Microinverter (Q.MI.349B-G1)
This product is UL listed as PV Rapid Shut Down Equipment
UL1741, UL 1741SA, UL 1741SB, CSA C22.2 No 107.

AC Module (Q.TRON BLK M-G2.XY+/AC solar module series, where "X" can be any letter between A to W and "Y" can be any number between 1 to 9.)
UL 1741, CSA C22.2 No. 107, IEEE E1547.

Accessories (Additional parts, not included in AC module package)

Model		Category
 UL9703 E493181	CAS-HQ-SH-650 CAS-HQ-SH-800 CAS-HQ-SH-900	Short AC cable (L = 650 / 800 / 900 mm): short cable. Intended for connecting portrait oriented PV modules.
	CAS-HQ-LO-1000 CAS-HQ-LO-1300 CAS-HQ-LO-1400	Long AC cable (L = 1000 / 1300 / 1400 mm): long cable. Intended for connecting landscape oriented PV modules.
 UL3003 E533140	CAB-HQ-KIT-200	AC Cable (Raw) : 200 m cable without AC connector for the free design of AC PV installation. - Detail components : 200 meter (656 ft)
 UL6703 E479328	CON-HQ-KIT-20	AC Connector : To assemble the AC cable (CAB-HQ-KIT-200) by installer themselves. - Detail components : 20pcs Female + 20pcs Male
 UL9703 E493181	ECAP-HQ-KIT-20	End Cap : To close the end of AC cable. - Detail components : 20pcs Female + 20pcs Male
 UL9703 E493181	UNT-HQ-TOOL-G1	AC cable and DC cable Unlocking Tool

Specifications subject to technical changes © Qcells Q.TRON_AC_MODULE_series_DCA_420-440_2026-02_Rev01_NA

Find product recycling details at QR code above

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