

### Q.TRON AC

- Q.TRON BLK M-G2+/AC
- Q.TRON BLK M-G2.1+/AC
- Q.TRON BLK M-G2.E1+/AC
- Q.TRON BLK M-G2.C1+/AC
- Q.TRON BLK M-G2.D1+/AC
- Q.TRON BLK M-G2.H1+/AC



# Q.TRON AC

AC module powered by Q.ANTUM NEO Technology



### Module-Level Monitoring & Control

- Easily and intelligently monitor system performance at the module level using the Q.OMMAND PRO App for installers
- Homeowners have PV production visibility at their fingertips with the user friendly Q.OMMAND HOME App
- Enhanced communications performance, thanks to high-bandwidth PLC communication technology



### Streamlined Installation & Product Management

- Fast installation enabled by integrated Qcells microinverter
- QR codes on both module and embedded microinverter allow installer to map out arrays in the Q.OMMAND Pro app pre- or post-installation
- Improved inventory management enabled by reduced SKU counts and one complete module and MLPE solution by the same brand
- 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, delivering up to 22.0% efficiency
- Lowest module degradation rate compared with Tier 1 TOPCon competitors, translating to more power production over time (90%+ nominal power guaranteed after 25 years)



### Top Quality Customer Support & Post-Sales Servicing

- Top tier, responsive customer support offered by Qcells for rapid system troubleshooting
- Detachable microinverter simplifies onsite maintenance when required
- Inbound module and microinverter related inquiries all supported by one brand



Warranty  
Product & Performance

### Dependably Backed by One Warrantor

- Inclusive 25-year product warranty and 25-year linear performance warranty
- Integrated module & microinverter solution backed by one bankable, leading complete solutions provider



### USA Manufacturing

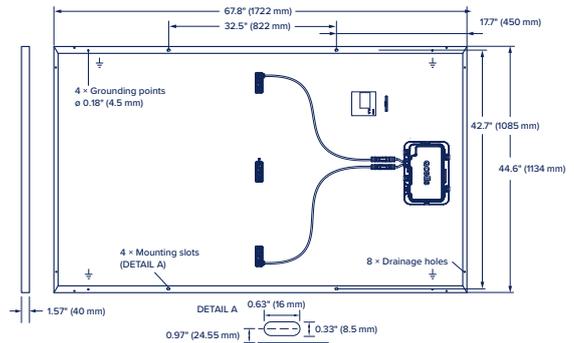
- Module and microinverter both assembled in the USA by America's No.1 residential module manufacturer

## 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

<b>Format</b>	67.8 in × 44.6 in × 1.57 in (including frame) (1722 mm × 1134 mm × 40 mm)
<b>Weight</b>	50.59 lbs (22.95 kg)
<b>Front Cover</b>	0.13 in (3.2 mm) thermally pre-stressed ARC solar glass
<b>Back Cover</b>	Composite film
<b>Frame</b>	Black anodized aluminum
<b>Cell</b>	6 × 18 monocrystalline Q.ANTUM NEO solar half cells
<b>Junction Box</b>	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
<b>Cable</b>	4 mm <sup>2</sup> Solar cable; (+) ≥ 25.8 in (655 mm), (-) ≥ 25.2 in (640 mm)
<b>Connector</b>	Stäubli MC4; IP68



## AC Output Electrical Characteristics

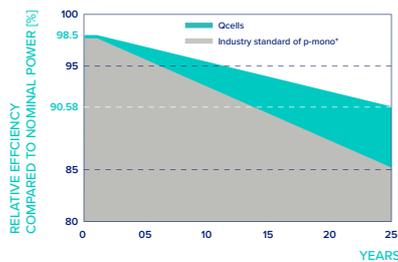
Q.MI.349B-G1 (Model Name)					
Peak Output Power	[VA]	366	Power Factor (adjustable)	0.85 leading...0.85 lagging	
Max Continuous Output Power	[VA]	349	Max. number of AC Modules per Q.HOME COMBINER 80 G1	[ea]	44 (Q.HOME COMBINER CB : Max 4)
Nominal (L-L) Voltage / Range	[V]	240 / 211 to 264	Max Units per 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

## Electrical Characteristics

POWER CLASS		415	420	425	430	435	440	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5W/-0W)								
Minimum	Power at MPP <sup>1</sup>	P <sub>MPP</sub> [W]	415	420	425	430	435	440
	Short Circuit Current <sup>1</sup>	I <sub>SC</sub> [A]	13.49	13.58	13.66	13.74	13.82	13.90
	Open Circuit Voltage <sup>1</sup>	V <sub>OC</sub> [V]	38.47	38.75	39.03	39.32	39.60	39.88
	Current at MPP	I <sub>MPP</sub> [A]	12.83	12.91	12.98	13.05	13.13	13.20
	Voltage at MPP	V <sub>MPP</sub> [V]	32.34	32.54	32.74	32.94	33.14	33.33
	Efficiency <sup>1</sup>	η [%]	≥21.3	≥21.5	≥21.8	≥22.0	≥22.3	≥22.5
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>								
Minimum	Power at MPP	P <sub>MPP</sub> [W]	313.7	317.5	321.2	325.0	328.8	332.6
	Short Circuit Current	I <sub>SC</sub> [A]	10.87	10.94	11.00	11.07	11.14	11.20
	Open Circuit Voltage	V <sub>OC</sub> [V]	36.50	36.77	37.04	37.31	37.58	37.84
	Current at MPP	I <sub>MPP</sub> [A]	10.10	10.15	10.21	10.27	10.33	10.38
	Voltage at MPP	V <sub>MPP</sub> [V]	31.07	31.26	31.46	31.65	31.84	32.03

<sup>1</sup>Measurement tolerances P<sub>MPP</sub> ± 3%; I<sub>SC</sub>; V<sub>OC</sub> ± 5% at STC; 1000 W/m<sup>2</sup>, 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • <sup>2</sup>800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5

## Qcells PERFORMANCE WARRANTY

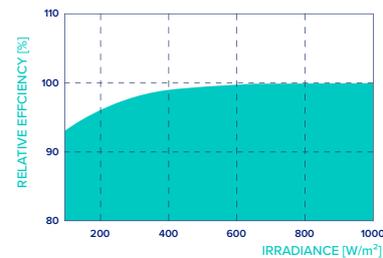


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 90.58% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation 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/m<sup>2</sup>).

## TEMPERATURE COEFFICIENTS

Temperature Coefficient of I <sub>SC</sub>	α	[%/K]	+0.04	Temperature Coefficient of V <sub>OC</sub>	β	[%/K]	-0.24
Temperature Coefficient of P <sub>MPP</sub>	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 (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 <sup>2</sup>		[lbs/ft <sup>2</sup> ]	113 (5400 Pa)/75 (3600 Pa)	Permitted Module Temperature on Continuous Duty <sup>2</sup>	-40°F up to +140°F (-40°C up to +60°C)
Max. Test Load, Push/Pull <sup>3</sup>		[lbs/ft <sup>2</sup> ]	169 (8100 Pa)/113 (5400 Pa)	Storage Temperature Range <sup>2</sup>	-4°F up to +113°F (-20°C up to +45°C)

<sup>2</sup> 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 "+85°C (+185°F)".

<sup>3</sup> See Installation Manual

## ■ Qualifications and Certificates

### Base DC module (Q.TRON(BLK) M-G2.X solar module series)

UL 61730-1 & UL 61730-2, CE-compliant;  
Quality Controlled PV - TÜV Rheinland;  
IEC 61215:2016;  
IEC 61730:2016.  
This data sheet complies  
with DIN EN 50380.

### Qcells Microinverter (Q.MI.349B-G1 (Model Name))

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.X/AC solar module series)

UL 1741, CSA C22.2 No. 107



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

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



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.  
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