

# Q.TRON M-G2+ SERIES



410 - 435 Wp | 108 Cells  
22.3% Maximum Module Efficiency

MODEL Q.TRON M-G2+



## High performance Qcells N-type solar cells

Q.ANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.3%.



## A reliable investment

Inclusive 25-year product warranty and 25-year linear performance warranty<sup>1</sup>.



## Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology<sup>2</sup>, Hot-Spot Protect.



## Extreme weather rating

High-tech aluminium 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.



## The most thorough testing programme in the industry

Qcells is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

<sup>1</sup> See data sheet on rear for further information.

<sup>2</sup> APT test conditions according to IEC/TS 62804-1:2015, method A (-1500 V, 96 h)

### The ideal solution for:



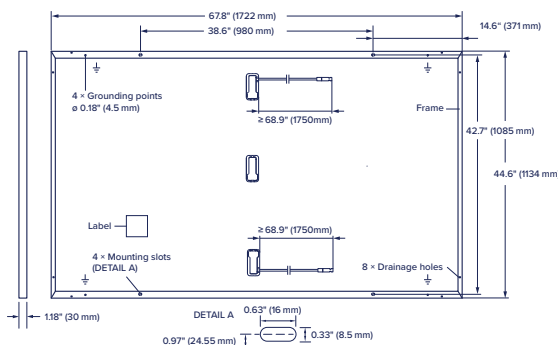
Rooftop arrays on residential buildings



# Q.TRON 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 anodised aluminium
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 mm <sup>2</sup> Solar cable; (+) ≥ 68.9 in (1750mm), (-) ≥ 68.9 in (1750mm)
Connector	Stäubli MC4; IP68

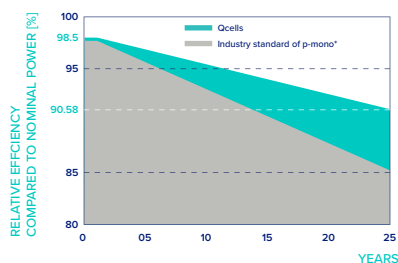


## Electrical Characteristics

POWER CLASS		410	415	420	425	430	435	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5 W/-0 W)								
Minimum	Power at MPP <sup>1</sup>	$P_{MPP}$ [W]	410	415	420	425	430	435
	Short Circuit Current <sup>1</sup>	$I_{SC}$ [A]	13.56	13.64	13.73	13.81	13.89	13.97
	Open Circuit Voltage <sup>1</sup>	$V_{OC}$ [V]	37.93	38.21	38.48	38.76	39.04	39.32
	Current at MPP	$I_{MPP}$ [A]	12.89	12.96	13.03	13.11	13.18	13.26
	Voltage at MPP	$V_{MPP}$ [V]	31.82	32.02	32.22	32.42	32.62	32.82
	Efficiency <sup>1</sup>	$\eta$ [%]	≥ 21.0	≥ 21.3	≥ 21.5	≥ 21.8	≥ 22.0	≥ 22.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>								
Minimum	Power at MPP	$P_{MPP}$ [W]	309.9	313.7	317.5	321.2	325.0	328.8
	Short Circuit Current	$I_{SC}$ [A]	10.93	10.99	11.06	11.13	11.19	11.26
	Open Circuit Voltage	$V_{OC}$ [V]	35.98	36.25	36.51	36.78	37.04	37.31
	Current at MPP	$I_{MPP}$ [A]	10.14	10.20	10.25	10.31	10.37	10.42
	Voltage at MPP	$V_{MPP}$ [V]	30.57	30.77	30.96	31.16	31.35	31.54

<sup>1</sup>Measurement tolerances  $P_{MPP} \pm 3\%$ ;  $I_{SC}$ ;  $V_{OC} \pm 5\%$  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

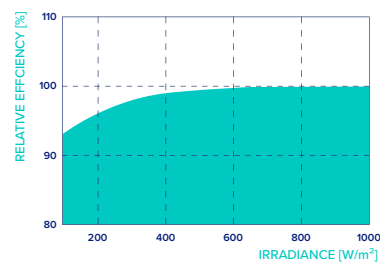


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 90.58% of nominal power up to 25 years.

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 $I_{SC}$	$\alpha$ [%/K]	+0.04	Temperature Coefficient of $V_{OC}$	$\beta$ [%/K]	-0.24
Temperature Coefficient of $P_{MPP}$	$\gamma$ [%/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 <sup>3</sup>	[lbs/ft <sup>2</sup> ]	113 (5400 Pa)/50 (2400 Pa)	Permitted Module Temperature on Continuous Duty	-40°F up to +185°F (-40°C up to +85°C)
Max. Test Load, Push/Pull <sup>3</sup>	[lbs/ft <sup>2</sup> ]	169 (8100 Pa)/75 (3600 Pa)		

<sup>3</sup> See Installation Manual

## Qualifications and Certificates

UL61730-1 & UL61730-2, CE-compliant, Quality Controlled PV - TÜV Rheinland, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells).



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.

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