

# Q.TRON BLK M-G2+ SERIES



405-430 Wp | 108 Cells  
22.0% Maximum Module Efficiency

MODEL Q.TRON BLK M-G2+



## High performance Qcells N-type solar cells

Q.ANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.0%.



## 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:



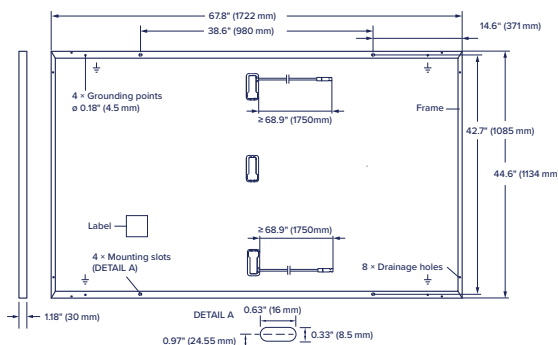
Rooftop arrays on residential buildings



# Q.TRON 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 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 (1750 mm), (-) ≥ 68.9 in (1750 mm)
Connector	Stäubli MC4; IP68

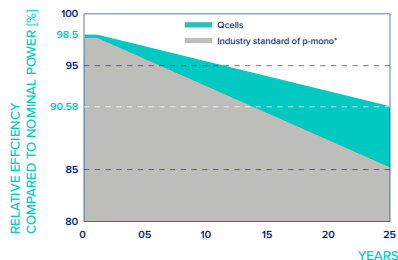


## Electrical Characteristics

POWER CLASS		405	410	415	420	425	430	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5 W/-0 W)								
Minimum	Power at MPP <sup>1</sup>	P <sub>MPP</sub> [W]	405	410	415	420	425	430
	Short Circuit Current <sup>1</sup>	I <sub>SC</sub> [A]	13.33	13.41	13.49	13.58	13.66	13.74
	Open Circuit Voltage <sup>1</sup>	V <sub>OC</sub> [V]	37.91	38.19	38.47	38.75	39.03	39.32
	Current at MPP	I <sub>MPP</sub> [A]	12.69	12.76	12.83	12.91	12.98	13.05
	Voltage at MPP	V <sub>MPP</sub> [V]	31.93	32.13	32.34	32.54	32.74	32.94
	Efficiency <sup>1</sup>	η [%]	≥20.7	≥21.0	≥21.3	≥21.5	≥21.8	≥22.0
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>								
Minimum	Power at MPP	P <sub>MPP</sub> [W]	306.1	309.9	313.7	317.5	321.2	325.0
	Short Circuit Current	I <sub>SC</sub> [A]	10.74	10.81	10.87	10.94	11.00	11.07
	Open Circuit Voltage	V <sub>OC</sub> [V]	35.96	36.23	36.50	36.77	37.04	37.31
	Current at MPP	I <sub>MPP</sub> [A]	9.98	10.04	10.10	10.15	10.21	10.27
	Voltage at MPP	V <sub>MPP</sub> [V]	30.66	30.87	31.07	31.26	31.46	31.65

<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

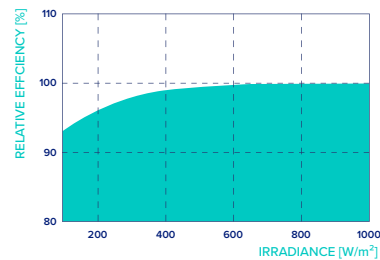


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 90.58% of nominal power up to 25 years.

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

<sup>\*</sup>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 <sub>sys</sub>	[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).



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