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 warranty¹.



Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology 2 , 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.









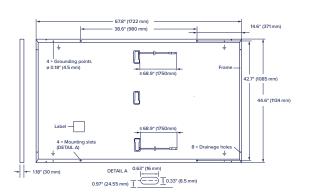


¹ See data sheet on rear for further information.

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

■ 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	$2.09\text{-}3.98\text{in}\times 1.26\text{-}2.36\text{in}\times 0.59\text{-}0.71\text{in}$ (53-101 mm \times 32-60 mm \times 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



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■ Electrical Characteristics

OWER CLASS			405	410	415	420	425	430
NIMUM PERFORMANCE AT STANDARD	TEST CONDITIONS, ST	C1 (POWER 1	OLERANCE +5 V	V/-0 W)				
Power at MPP ¹	P _{MPP}	[W]	405	410	415	420	425	430
Short Circuit Current ¹	I _{sc}	[A]	13.33	13.41	13.49	13.58	13.66	13.74
Open Circuit Voltage ¹	V _{oc}	[V]	37.91	38.19	38.47	38.75	39.03	39.32
Current at MPP	I _{MPP}	[A]	12.69	12.76	12.83	12.91	12.98	13.05
Voltage at MPP	V _{MPP}	[V]	31.93	32.13	32.34	32.54	32.74	32.94
Efficiency ¹	η	[%]	≥20.7	≥21.0	≥21.3	≥21.5	≥21.8	≥22.0
NIMUM PERFORMANCE AT NORMAL OP	ERATING CONDITION	-						
Power at MPP	P _{MPP}	[W]	306.1	309.9	313.7	317.5	321.2	325.0
Short Circuit Current	I _{sc}	[A]	10.74	10.81	10.87	10.94	11.00	11.07
Open Circuit Voltage	V _{oc}	[V]	35.96	36.23	36.50	36.77	37.04	37.31

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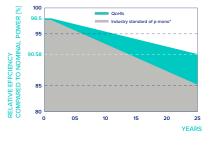
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 \overline{V}_{MPP} [V] Voltage at MPP $^{1}\text{Measurement tolerances P}_{\text{MPP}}\pm3\%; I_{\text{SC}}; V_{\text{OC}}\pm5\% \text{ at STC: }1000 \text{ W/m}^{2}, 25\pm2\text{ °C}, \text{AM 1.5 according to IEC }60904-3 \bullet ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC }60904-3 \bullet ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC }60904-3 \bullet ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM 1.5 } 1000 \text{ W/m}^{2}, \text{NMOT, spect$

[A]

Qcells PERFORMANCE WARRANTY

Current at MPP



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 Ocells 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

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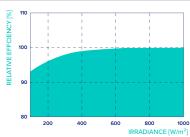
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Typical module performance under low irradiance conditions in comparison to STC conditions ($25\,^{\circ}\text{C}$, $1000\,\text{W/m}^2$).

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	$V_{\rm sys}$	[V]	1000 (IEC)/1000 (UL)	PV module
Maximum Series Fuse Rating		[A DC]	25	Fire Rating
Max. Design Load, Push/Pull ³		[lbs/ft²]	113 (5400 Pa)/50 (2400 Pa)	Permitted N
Max. Test Load. Push/Pull ³		[lbs/ft²]	169 (8100 Pa)/75 (3600 Pa)	on Continu

³ See Installation Manual

PV module classification	Class II
Fire Rating based on ANSI/UL 61730	C / TYPE 2
Permitted Module Temperature	-40°F up to +185°F
on Continuous Duty	(-40°C up to +85°C)

■ 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).









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