

Q.TRON M-G2+ SERIES



425 - 450 Wp | 108 Cells
23.0% Maximum Module Efficiency

MODEL Q.TRON M-G2+
Q.TRON M-G2.4+



Q.ANTUM
NEO

High performance Qcells N-type solar cells

Q.ANTUM NEO solar cell technology with optimized module layout boosts module efficiency up to 23.0%.



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 Technology², Hot-Spot Protect.



Extreme weather rating

High-tech aluminium alloy frame, certified for high snow (8100 Pa) and wind loads (4000 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 (-1500V, 96h)

The ideal solution for:



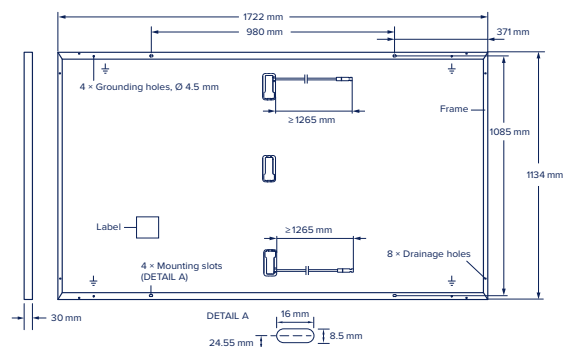
Rooftop arrays on
residential buildings



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Mechanical Specification

Format	1722 mm × 1134 mm × 30 mm (including frame)
Weight	21.2 kg
Front Cover	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	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥1265 mm, (-) ≥1265 mm
Connector	Stäubli MC4, Hanwha Q CELLS HQC4; IP68



Electrical Characteristics

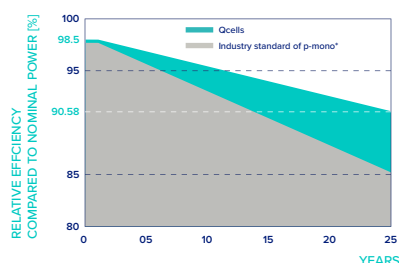
POWER CLASS			425	430	435	440	445	450
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W/-0 W)								
Minimum	Power at MPP ¹	P _{MPP} [W]	425	430	435	440	445	450
	Short Circuit Current ¹	I _{SC} [A]	13.81	13.89	13.97	14.06	14.14	14.22
	Open Circuit Voltage ¹	V _{OC} [V]	38.76	39.04	39.32	39.60	39.87	40.15
	Current at MPP	I _{MPP} [A]	13.11	13.18	13.26	13.33	13.40	13.48
	Voltage at MPP	V _{MPP} [V]	32.42	32.62	32.82	33.01	33.20	33.39
	Efficiency ¹	η [%]	≥21.8	≥22.0	≥22.3	≥22.5	≥22.8	≥23.0

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²

Minimum	Power at MPP	P _{MPP} [W]	321.2	325.0	328.8	332.6	336.4	340.1
	Short Circuit Current	I _{SC} [A]	11.13	11.19	11.26	11.33	11.39	11.46
	Open Circuit Voltage	V _{OC} [V]	36.78	37.04	37.31	37.58	37.84	38.11
	Current at MPP	I _{MPP} [A]	10.31	10.37	10.42	10.48	10.54	10.60
	Voltage at MPP	V _{MPP} [V]	31.16	31.35	31.54	31.73	31.92	32.10

¹Measurement 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 • ²800 W/m², NMOT, spectrum AM 1.5

Qcells PERFORMANCE WARRANTY

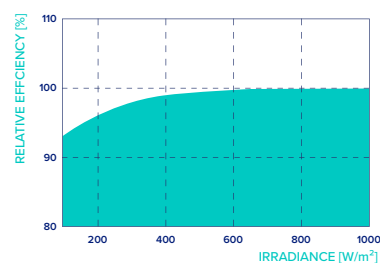


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 90.58% of nominal power up to 25 years.

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/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]	-0.30	Nominal Module Operating Temperature	NMOT	[°C]	43 ± 3

Properties for System Design

Maximum System Voltage	V _{sys}	[V]	1000	PV module classification	Class II
Maximum Reverse Current	I _R	[A]	25	Fire Rating based on ANSI/UL 61730	C/TYPE 2
Max. Design Load, Push/Pull		[Pa]	5400/2660	Permitted Module Temperature on Continuous Duty	-40 °C - +85 °C
Max. Test Load, Push/Pull		[Pa]	8100/4000		

Qualifications and Certificates

Quality Controlled PV -
TÜV Rheinland;
IEC 61215:2016;
IEC 61730:2016.
This data sheet complies
with DIN EN 50380.



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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