

Q.TRON CLASSIC



DRAFT

495 - 515 Wp | 108 Cells
23.2% Maximum Module Efficiency

MODEL Q.TRON M-G3R.12+ /BFG



High performance Qcells N-type solar cells

Q.ANTUM NEO solar cell technology with optimized module layout boosts module efficiency up to 23.2%.



A reliable investment

Inclusive 25-year product warranty and improved 30-year 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 (5400 Pa) and wind loads (2400 Pa).



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



Far beyond the standard

Qcells' comprehensive quality program ensures high long-term yields and the reliability of your solar system.

¹ See data sheet on rear for further information.

² 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



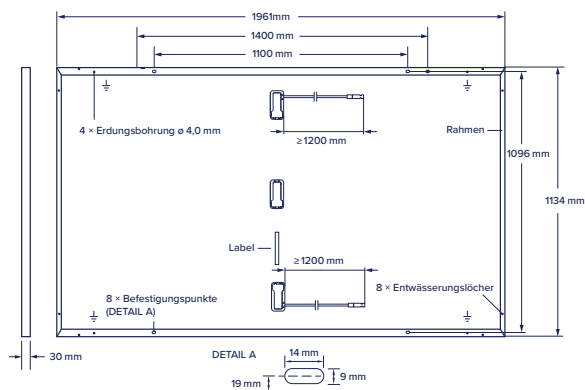
Rooftop arrays on commercial/industrial buildings



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Mechanical Specification

Format	1961mm × 1134 mm × 30 mm (including Frame)
Weight	27.0 kg
Front Cover	2.0 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	2.0 mm semi-tempered glass
Frame	Anodised aluminium
Cell	6 × 18 monocrystalline Q.ANTUM NEO solar half cells
Junction Box	53-67 mm × 28 mm × 17 mm Protection class IP68, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥1200 mm, (-) ≥1200 mm
Connector	Stäubli MC4-Evo2; IP68



Electrical Characteristics

Power Class		495	500	505	510	515	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5W/-0W)							
Minimum	Power at MPP ¹	P _{MPP} [W]	495	500	505	510	515
	Short Circuit Current ¹	I _{SC} [A]	15.86	15.89	15.92	15.95	15.98
	Open Circuit Voltage ¹	U _{OC} [V]	39.88	40.06	40.24	40.42	40.60
	Current at MPP	I _{MPP} [A]	14,80	14,84	14,88	14,92	14,96
	Voltage at MPP	U _{MPP} [V]	33,45	33,70	33,94	34,19	34,43
	Efficiency ¹	η [%]	≥22.3	≥22.5	≥22.7	≥22.9	≥23.2

Bifaciality of P_{MPP} and I_{SC} 80% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

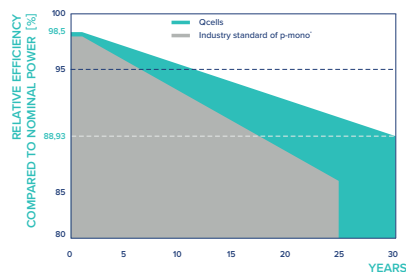
¹ Measurement tolerances P_{MPP}, I_{SC}, V_{OC} ± 3% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²

Minimum	Power at MPP	P _{MPP} [W]	374.0	378.0	381.0	385.0	389.0
	Short Circuit Current	I _{SC} [A]	12.80	12.83	12.85	12.88	12.90
	Open Circuit Voltage	U _{OC} [V]	37.97	38.14	38.31	38.48	38.65
	Current at MPP	I _{MPP} [A]	11.95	11.98	12.01	12.05	12.08
	Voltage at MPP	U _{MPP} [V]	31.30	31.56	31.73	31.96	32.21

² 800 W/m², NMOT, spectrum AM 1.5

Qcells Performance Warranty

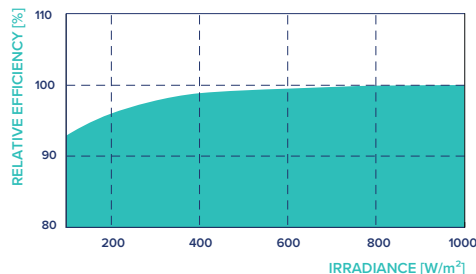


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 88.93% of nominal power up to 30 years.

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]	-0.28	Nominal Module Operating Temperature	NMOT	[°C]	45 ± 2

Properties for System Design

Maximum System Voltage	V _{SYS} [V]	1500	PV module classification	Class II
Maximum Reverse Current	I _R [A]	30	Fire Rating based on ANSI/UL 61730	A
Max. Design Load, Push/Pull	[Pa]	3600/1600	Permitted Module Temperature on Continuous Duty	-40°C - +85°C
Max. Test Load, Push/Pull	[Pa]	5400/2400		

Qualifications and Certificates

TÜV Nord;
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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