

Q.TRON CLASSIC



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

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



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 23.2%.



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 pv 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



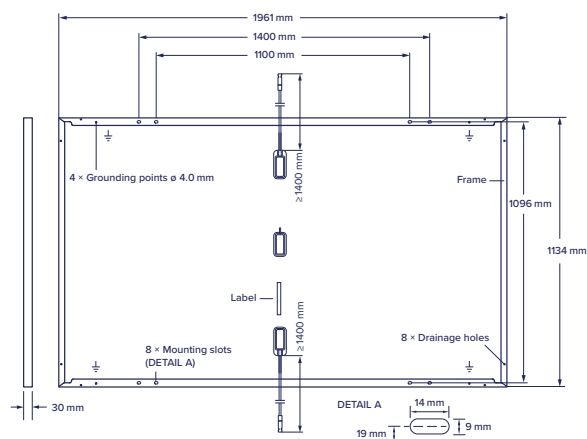
Ground-mounted
solar power plants



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Mechanical Specification

Format	1961 mm × 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; (+) ≥ 1400 mm, (-) ≥ 1400 mm
Connector	Stäubli MC4-EVO2A; IP68



Electrical Characteristics

Power Class				495	500	505	510	515
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W/-0 W)								
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

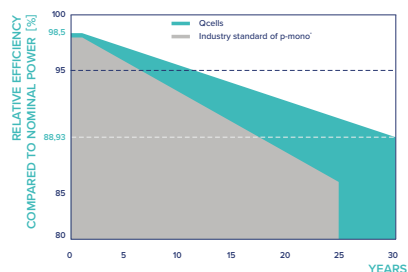
¹ Measurement tolerances P_{MPP}, I_{SC}, V_{OC} ± 3% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3

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

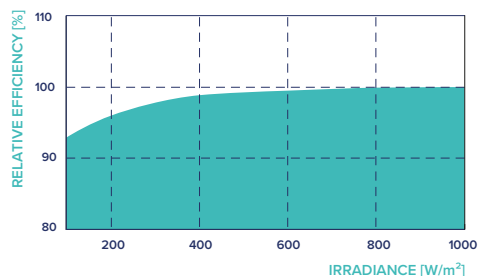


*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

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.

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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