Q.TRON CLASSIC

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 warranty[1].

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 (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

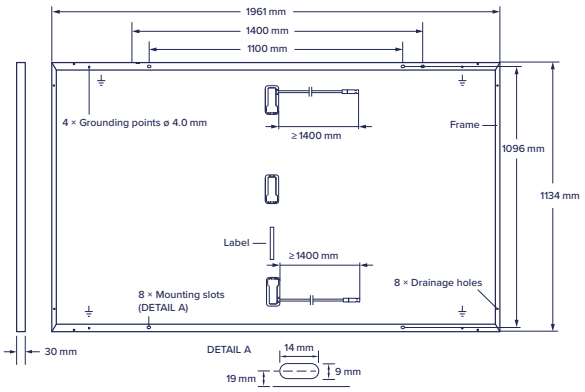
Rooftop arrays on commercial/industrial buildings

Ground-mounted solar power plants

Q.TRON CLASSIC

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 mm² Solar cable; (+) ≥1400 mm, (–) ≥1400 mm
Connector	Stäubli MC4-EVO2A; IP68



Electrical Characteristics

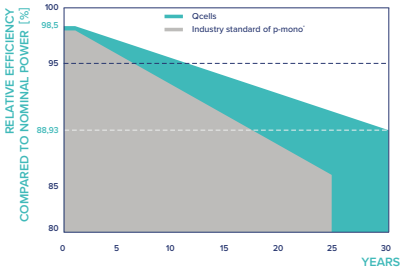
Power Class				495	500	505	510	515
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	495	500	505	510	515
	Short Circuit Current[1]	I_{SC}	[A]	15.86	15.89	15.92	15.95	15.98
	Open Circuit Voltage[1]	U_{OC}	[V]	39.88	40.06	40.24	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, NMOT[2]								
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

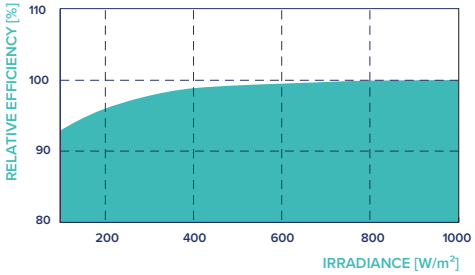


At least 98.5 % of nominal power during first year. Thereafter max. 0.33 % degradation per year. At least 95.53 % of nominal power up to 10 years. At least 88.93 % of nominal power up to 30 years.

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.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.
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