

Q.TRON M-G2+ SERIES



410 - 435 Wp | 108 Cells
22.3% Maximum Module Efficiency

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



High performance Qcells N-type solar cells

Q. ANTUM NEO solar cell technology with optimized module layout boosts module efficiency up to 22.3%.



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:



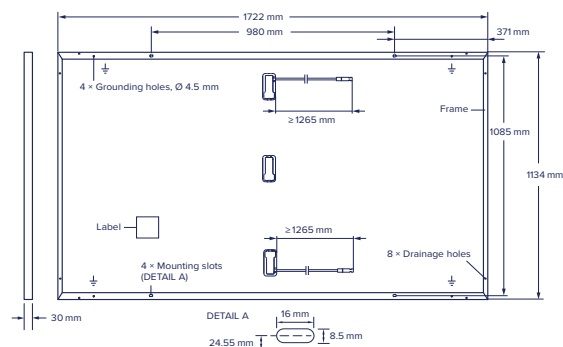
Rooftop arrays on
residential buildings



Q.TRON M-G2+ SERIES

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 × 25-60 mm × 15-18 mm Protection class IP68, with bypass diodes |
| Cable | 4 mm ² Solar cable; (+) ≥1265 mm, (-) ≥1265 mm |
| Connector | Stäubli MC4, Hanwha Q CELLS HQC4; IP68 |



Electrical Characteristics

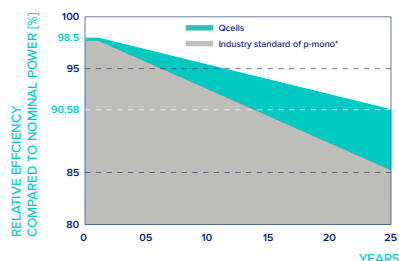
| POWER CLASS | | | 410 | 415 | 420 | 425 | 430 | 435 |
|---|------------------------------------|----------------------|-------|-------|-------|-------|-------|-------|
| MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W/-0 W) | | | | | | | | |
| Minimum | Power at MPP ¹ | P _{MPP} [W] | 410 | 415 | 420 | 425 | 430 | 435 |
| | Short Circuit Current ¹ | I _{SC} [A] | 13.56 | 13.64 | 13.73 | 13.81 | 13.89 | 13.97 |
| | Open Circuit Voltage ¹ | V _{OC} [V] | 37.93 | 38.21 | 38.48 | 38.76 | 39.04 | 39.32 |
| | Current at MPP | I _{MPP} [A] | 12.89 | 12.96 | 13.03 | 13.11 | 13.18 | 13.26 |
| | Voltage at MPP | V _{MPP} [V] | 31.82 | 32.02 | 32.22 | 32.42 | 32.62 | 32.82 |
| | Efficiency ¹ | η [%] | ≥21.0 | ≥21.3 | ≥21.5 | ≥21.8 | ≥22.0 | ≥22.3 |

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²

| | | | | | | | | |
|---------|-----------------------|----------------------|-------|-------|-------|-------|-------|-------|
| Minimum | Power at MPP | P _{MPP} [W] | 309.9 | 313.7 | 317.5 | 321.2 | 325.0 | 328.8 |
| | Short Circuit Current | I _{SC} [A] | 10.93 | 10.99 | 11.06 | 11.13 | 11.19 | 11.26 |
| | Open Circuit Voltage | V _{OC} [V] | 35.98 | 36.25 | 36.51 | 36.78 | 37.04 | 37.31 |
| | Current at MPP | I _{MPP} [A] | 10.14 | 10.20 | 10.25 | 10.31 | 10.37 | 10.42 |
| | Voltage at MPP | V _{MPP} [V] | 30.57 | 30.77 | 30.96 | 31.16 | 31.35 | 31.54 |

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

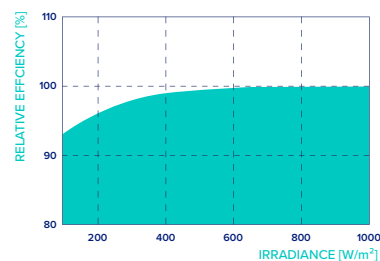


At least 98.5% of nominal power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal power up to 10 years. At least 90.58% of nominal power up to 25 years.

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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