

powered by

**Q.ANTUM DUO Z**

# Q.PEAK DUO BLK ML-G10+ 385-410

ENDURING HIGH  
PERFORMANCE



#### BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.1%.



#### THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY

Q CELLS 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.



#### INNOVATIVE ALL-WEATHER TECHNOLOGY

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



#### ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Hot-Spot Protect and Traceable Quality Tra.Q™.



#### EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



#### A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty<sup>1</sup>.

<sup>1</sup> See data sheet on rear for further information.



#### THE IDEAL SOLUTION FOR:



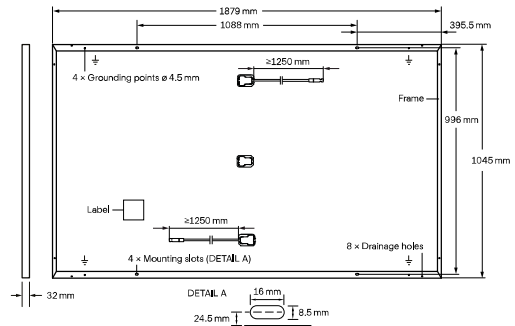
Rooftop arrays on  
residential buildings

Engineered in Germany

**Q CELLS**

## MECHANICAL SPECIFICATION

|              |                                                                              |
|--------------|------------------------------------------------------------------------------|
| Format       | 1879mm × 1045mm × 32mm (including frame)                                     |
| Weight       | 22.0kg                                                                       |
| Front Cover  | 3.2mm thermally pre-stressed glass with anti-reflection technology           |
| Back Cover   | Composite film                                                               |
| Frame        | Black anodised aluminium                                                     |
| Cell         | 6 × 22 monocrystalline Q.ANTUM solar half cells                              |
| Junction box | 53-101 mm × 32-60 mm × 15-18 mm<br>Protection class IP67, with bypass diodes |
| Cable        | 4 mm <sup>2</sup> Solar cable; (+) ≥1250 mm, (-) ≥1250 mm                    |
| Connector    | Stäubli MC4; IP68                                                            |

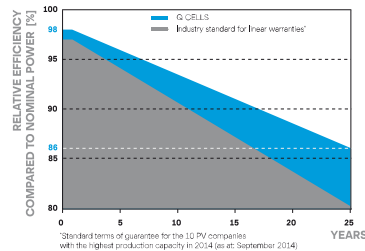


## ELECTRICAL CHARACTERISTICS

| POWER CLASS                                                                                     |                                    |                  | 385 | 390   | 395   | 400   | 405   | 410   |       |
|-------------------------------------------------------------------------------------------------|------------------------------------|------------------|-----|-------|-------|-------|-------|-------|-------|
| MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5 W / -0 W) |                                    |                  |     |       |       |       |       |       |       |
| Minimum                                                                                         | Power at MPP <sup>1</sup>          | P <sub>MPP</sub> | [W] | 385   | 390   | 395   | 400   | 405   | 410   |
|                                                                                                 | Short Circuit Current <sup>1</sup> | I <sub>SC</sub>  | [A] | 11.04 | 11.07 | 11.10 | 11.14 | 11.17 | 11.20 |
|                                                                                                 | Open Circuit Voltage <sup>1</sup>  | V <sub>OC</sub>  | [V] | 45.19 | 45.23 | 45.27 | 45.30 | 45.34 | 45.37 |
|                                                                                                 | Current at MPP                     | I <sub>MPP</sub> | [A] | 10.59 | 10.65 | 10.71 | 10.77 | 10.83 | 10.89 |
|                                                                                                 | Voltage at MPP                     | V <sub>MPP</sub> | [V] | 36.36 | 36.62 | 36.88 | 37.13 | 37.39 | 37.64 |
|                                                                                                 | Efficiency <sup>1</sup>            | η                | [%] | ≥19.6 | ≥19.9 | ≥20.1 | ≥20.4 | ≥20.6 | 20.9  |
| MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>                           |                                    |                  |     |       |       |       |       |       |       |
| Minimum                                                                                         | Power at MPP                       | P <sub>MPP</sub> | [W] | 288.8 | 292.6 | 296.3 | 300.1 | 303.8 | 307.6 |
|                                                                                                 | Short Circuit Current              | I <sub>SC</sub>  | [A] | 8.90  | 8.92  | 8.95  | 8.97  | 9.00  | 9.03  |
|                                                                                                 | Open Circuit Voltage               | V <sub>OC</sub>  | [V] | 42.62 | 42.65 | 42.69 | 42.72 | 42.76 | 42.79 |
|                                                                                                 | Current at MPP                     | I <sub>MPP</sub> | [A] | 8.35  | 8.41  | 8.46  | 8.51  | 8.57  | 8.62  |
|                                                                                                 | Voltage at MPP                     | V <sub>MPP</sub> | [V] | 34.59 | 34.81 | 35.03 | 35.25 | 35.46 | 35.68 |

<sup>1</sup>Measurement tolerances P<sub>MPP</sub> ±3%; I<sub>SC</sub>, V<sub>OC</sub> ±5% at STC: 1000 W/m<sup>2</sup>, 25 ±2 °C, AM 1.5 according to IEC 60904-3 - 2800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5

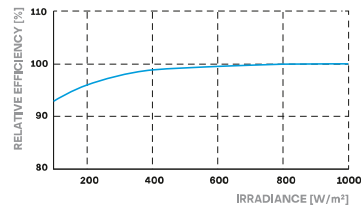
### Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS 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/m<sup>2</sup>).

### TEMPERATURE COEFFICIENTS

|                                             |   |       |       |                                            |      |       |       |
|---------------------------------------------|---|-------|-------|--------------------------------------------|------|-------|-------|
| Temperature Coefficient of I <sub>SC</sub>  | α | [%/K] | +0.04 | Temperature Coefficient of V <sub>OC</sub> | β    | [%/K] | -0.27 |
| Temperature Coefficient of P <sub>MPP</sub> | γ | [%/K] | -0.34 | Nominal Module Operating Temperature       | NMOT | [°C]  | 43 ±3 |

## PROPERTIES FOR SYSTEM DESIGN

|                               |                  |      |             |                                                 |                 |
|-------------------------------|------------------|------|-------------|-------------------------------------------------|-----------------|
| Maximum System Voltage        | V <sub>SYS</sub> | [V]  | 1000        | PV module classification                        | Class II        |
| Maximum Reverse Current       | I <sub>R</sub>   | [A]  | 20          | Fire Rating based on ANSI / UL 61730            | C / TYPE 2      |
| Max. Design Load, Push / Pull |                  | [Pa] | 3600 / 2660 | Permitted Module Temperature on Continuous Duty | -40 °C - +85 °C |
| Max. Test Load, Push / Pull   |                  | [Pa] | 5400 / 4000 |                                                 |                 |

## QUALIFICATIONS AND CERTIFICATES

Quality Controlled PV - TÜV Rheinland;  
IEC 61215:2016; IEC 61730:2016.  
This data sheet complies  
with DIN EN 50380.  
QCPV Certification ongoing.  
Certification holder:  
Hanwha Q CELLS GmbH



## PACKAGING INFORMATION

|                      |        |        |        |       |            |            |            |
|----------------------|--------|--------|--------|-------|------------|------------|------------|
| Horizontal packaging | 1940mm | 1100mm | 1220mm | 751kg | 28 pallets | 24 pallets | 32 modules |
|----------------------|--------|--------|--------|-------|------------|------------|------------|

**Note:** Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

**Made in Korea**

**Hanwha Q CELLS Australia Pty Ltd**

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Engineered in Germany

