

powered by

**Q.ANTUM DUO Z**

# Q.PEAK DUO BLK ML-G9

## 365-385

ENDURING HIGH PERFORMANCE



### BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.6%.



### 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, Anti PID Technology<sup>1</sup>, Hot-Spot Protect and Traceable Quality Tra.Q™.



### EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (6000 Pa) and wind loads (4000 Pa).



### A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty<sup>2</sup>.



### STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

<sup>1</sup> APT test conditions according to IEC/TS 62804-1:2015, method A (-1500V, 96h)

<sup>2</sup> See data sheet on rear for further information.

### THE IDEAL SOLUTION FOR:



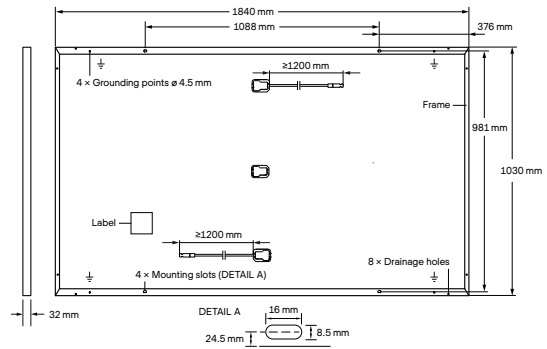
Rooftop arrays on residential buildings

Engineered in Germany

**Q CELLS**

## MECHANICAL SPECIFICATION

Format	1840 mm × 1030 mm × 32 mm (including frame)
Weight	19.5 kg
Front Cover	2.8 mm 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 Protection class IP67, with bypass diodes
Cable	4 mm <sup>2</sup> Solar cable; (+) ≥ 1200 mm, (-) ≥ 1200 mm
Connector	Stäubli MC4, Hanwha Q CELLS HQC4; IP68

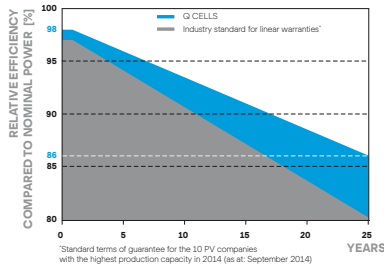


## ELECTRICAL CHARACTERISTICS

POWER CLASS			365	370	375	380	385
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5 W / -0 W)							
Minimum	Power at MPP <sup>1</sup>	$P_{MPP}$ [W]	365	370	375	380	385
	Short Circuit Current <sup>1</sup>	$I_{SC}$ [A]	10.40	10.44	10.47	10.50	10.53
	Open Circuit Voltage <sup>1</sup>	$V_{OC}$ [V]	44.93	44.97	45.01	45.04	45.08
	Current at MPP	$I_{MPP}$ [A]	9.87	9.92	9.98	10.04	10.10
	Voltage at MPP	$V_{MPP}$ [V]	36.99	37.28	37.57	37.85	38.13
	Efficiency <sup>1</sup>	$\eta$ [%]	≥ 19.3	≥ 19.5	≥ 19.8	≥ 20.1	≥ 20.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>							
Minimum	Power at MPP	$P_{MPP}$ [W]	273.3	277.1	280.8	284.6	288.3
	Short Circuit Current	$I_{SC}$ [A]	8.38	8.41	8.43	8.46	8.48
	Open Circuit Voltage	$V_{OC}$ [V]	42.37	42.41	42.44	42.48	42.51
	Current at MPP	$I_{MPP}$ [A]	7.76	7.81	7.86	7.91	7.96
	Voltage at MPP	$V_{MPP}$ [V]	35.23	35.48	35.72	35.96	36.20

<sup>1</sup>Measurement tolerances  $P_{MPP} \pm 3\%$ ;  $I_{SC}$ ;  $V_{OC} \pm 5\%$  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

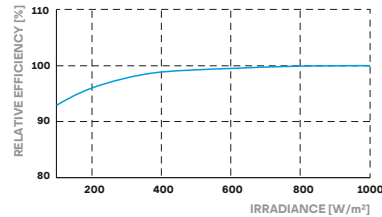


At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

<sup>1</sup>Standard terms of guarantee for the 10 PV companies with the highest production capacity in 2014 (as at September 2014)

### 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 $I_{SC}$	$\alpha$ [%/K]	+0.04	Temperature Coefficient of $V_{OC}$	$\beta$ [%/K]	-0.27
Temperature Coefficient of $P_{MPP}$	$\gamma$ [%/K]	-0.35	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]	20	Fire Rating based on ANSI / UL 61730	C / TYPE 2
Max. Design Load, Push / Pull	[Pa]	4000 / 2660	Permitted Module Temperature on Continuous Duty	-40°C - +85°C
Max. Test Load, Push / Pull	[Pa]	6000 / 4000		

## QUALIFICATIONS AND CERTIFICATES

IEC 61215:2016;  
IEC 61730:2016.  
This data sheet complies with DIN EN 50380.



## PACKAGING INFORMATION

Vertical packaging	1891mm	1130mm	1200mm	687.5kg	28 pallets	24 pallets	33 modules
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**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.

### Hanwha Q CELLS GmbH

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