QCells Q.PEAK DUO BLK ML-G10+



Brand: Q Cells Solar
Product Code: Q.PEAK DUO BLK ML-G10+ 400W
Availability: 2 - 3 Days
Weight: 22.00kg
Dimensions: 1,879.00mm x 1,045.00mm x 32.00mm

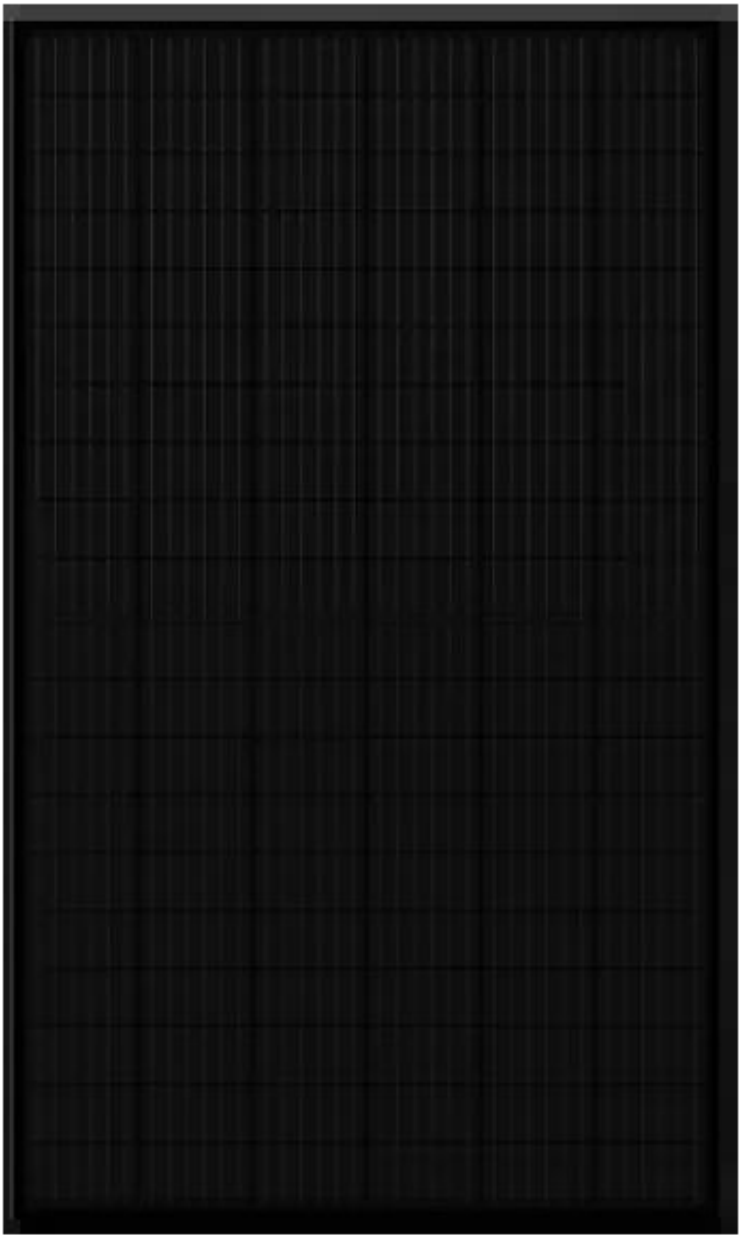
Price: $900.00

Ex Tax: $900.00

Short Description
In-depth review of the high efficiency QCells 400W solar panel made in the USA. Get the full details on specs, warranties and real-world performance before installing.

Description

Solar panel warranties aren't exactly straightforward, so we developed a scoring system to facilitate comparison between warranties from different solar panel companies. Each warranty factor has a unique scale determined based on its importance.



- **Power Rating:** 400W
- **Cell Type:** Monocrystalline
- **Panel Dimensions:** 1879.0 mm L 1045.0 mm W 32.0 mm D
- **Solar Panel Aesthetics:** Black Cell, Black Frame, Black Backsheet
- **Snow Load:** 5400 Pa
- **Wind Load:** 4000 Pa
- **Linear Warranty Term:** 25 years
- **Product Warranty Term:** 25 years
- **Made in USA**
- **Approximate cost per watt $2 .90**

Learn More about QCELLS solar

Product Performance

Rated Power 400W

Efficiency 20.4%

The G10 + series 400 W module comes in at a solid 20.4 % efficiency. This accomplishment is thanks largely to Q CELLS' zero gap Q.ANTUM DUO Z technology.

Power Tolerance 0/+5W

Power tolerance refers to the amount of electricity a panel will produce, either above or below its rated power capacity, at Standard Test Conditions (STC). The smaller the power tolerance deviation or range, the more accurate the rated power capacity is.Q CELLS modules have a power tolerance of -0/+5%.

This means Q CELL panels, including the PEAK DUO BLK ML-G10+ 400W will, at the minimum, operate at their rated capacity. The panels have exceeded their rated capacity by as much as 5% in third party testing. For example, a Q.PEAK DUO BLK ML-G10+ panel rated at 400 W will operate anywhere from 400 W to 420 W (or 5% higher than the rated 400 watts) under STC. With a -0% tolerance rating, the Q.PEAK DUO BLK ML-G10+ 400 panel operates at or above 400 W. American made Q Cells' tolerance means real world performance under Texas' most extreme conditions.

Temperature Coefficient PMax: -0.34

Solar panels perform best at 77°F (25°C). Here in Texas, obviously, we see temperatures that far exceed 77°F for long portions of the year. A solar panel's temperature coefficient is a measurement indicating how well a specific model of solar panel will perform outside of ideal operating conditions.

Knowing a panel's temperature coefficient and the temperature of the panel will allow you to predict your panel's performance during the dog days of summer.

Temperature coefficients are calculated in Celsius.

With each degree above 25°C /77°F, a given solar panel's electric output will be diminished by its temperature coefficient.

Using the above methodology, the Q.PEAK DUO BLK ML-G10+ 400W panel has a temperature coefficient of -0.347%/°C. Hence, when this panel's temperature increases by one degree, from 25°C to 26°C (77° F to 79° F), expect a 0.34% reduction in potential electric output.

When it's July in Texas and temperatures have climbed to 95° F/35° C, expect electric output to decrease by 3.4%. When the hottest hours of the summer drives the mercury into the triple digits, say 113° F/ 45° C, the panels will decrease approximately 6.8%.

Q.PEAK DUO BLK ML-G10+ 400W

Product Name and Model Number	Q.PEAK DUO BLK ML-GL10+ 400w
Manufacturer Name and Rating	QCells
Rated Power Output	400 watt
Efficiency Percentage	20.4%
Power Tolerance	+5.0%
Temperature Coefficient	-0.34%
Resiliency Specs	Snow load 5400Pa, Wind load 4000Pa
Output Warranty Term Length	25 year
Output Warranty Decline Rate	-0.5%
Materials Warranty Term Length	25 years
Cell Color(s)	Black
Frame	Black Anodized Aluminum Alloy
Backsheet Color(s)	White
Cell Type (e.g. monocrystalline)	Monocrystalline Q.ANTUM half cells
Panel Dimensions	1879 X 1045 X 32mm
Weight	48.5 lbs/ 22.kg
Number of Cells	72 cells
Connector Type	Staubli MC4, IP68
Manufacturer Location	USA Dalton, Georgia
Certifications Received (UL, IEC, ISO)	IEC, UL, ISO, TUV, CE
Average Cost per Watt	.75
Marketplace Average Pricing	.90 - 1.50

powered by Q.ANTUM DUO Z



Q.PEAK DUO BLK ML-G10+

385-405

ENDURING HIGH PERFORMANCE

Quality Controlled PV
TÜVRheinland CERTIFIED
www.tuv.com ID 1111232615

ASSEMBLED IN THE USA

25 YR Warranty
Product & Performance

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2021

Q CELLS Yield Security



6 BUSBAR CELL TECHNOLOGY

12 BUSBAR CELL TECHNOLOGY

BREAKING THE 20 % EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9 %.

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 behavior.

ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING

High-tech aluminum 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[2].

[1] APT test conditions according to IEC / TS 62804-1:2015, method A (–1500 V, 96 h)
[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

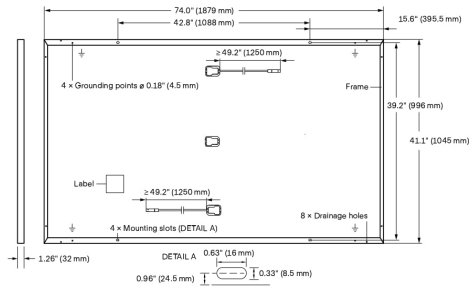
Rooftop arrays on residential buildings

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	74.0 in × 41.1 in × 1.26 in (including frame) (1879 mm × 1045 mm × 32 mm)
Weight	48.5 lbs (22.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 49.2 in (1250 mm), (−) ≥ 49.2 in (1250 mm)
Connector	Stäubli MC4; IP68

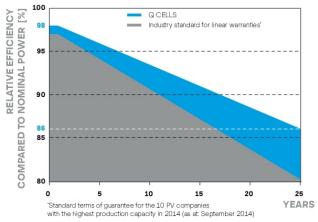


ELECTRICAL CHARACTERISTICS

POWER CLASS				385	390	395	400	405
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	385	390	395	400	405
	Short Circuit Current[1]	I_{SC}	[A]	11.04	11.07	11.10	11.14	11.17
	Open Circuit Voltage[1]	V_{OC}	[V]	45.19	45.23	45.27	45.30	45.34
	Current at MPP	I_{MPP}	[A]	10.59	10.65	10.71	10.77	10.83
	Voltage at MPP	V_{MPP}	[V]	36.36	36.62	36.88	37.13	37.39
	Efficiency[1]	η	[%]	≥ 19.6	≥ 19.9	≥ 20.1	≥ 20.4	≥ 20.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	288.8	292.6	296.3	300.1	303.8
	Short Circuit Current	I_{SC}	[A]	8.90	8.92	8.95	8.97	9.00
	Open Circuit Voltage	V_{OC}	[V]	42.62	42.65	42.69	42.72	42.76
	Current at MPP	I_{MPP}	[A]	8.35	8.41	8.46	8.51	8.57
	Voltage at MPP	V_{MPP}	[V]	34.59	34.81	35.03	35.25	35.46

[1]Measurement 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 • [2]800 W/m², NMOT, spectrum AM 1.5

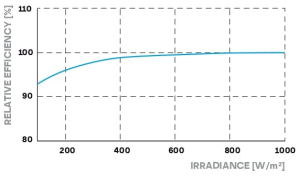
Q CELLS PERFORMANCE WARRANTY



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/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.34	Nominal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000 (IEC) / 1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 2
Max. Design Load, Push / Pull[3]	[lbs/ft²]	75 (3600 Pa) / 55 (2660 Pa)	Permitted Module Temperature on Continuous Duty	−40 °F up to +185 °F (−40 °C up to +85 °C)
Max. Test Load, Push / Pull[3]	[lbs/ft²]	113 (5400 Pa) / 84 (4000 Pa)		

[3] See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 61730, CE-compliant,
Quality Controlled PV - TÜV Rheinland,
IEC 61215:2016, IEC 61730:2016,
U.S. Patent No. 9,893,215 (solar cells),

C SP US Certified UL 61730

CE

TÜVRheinland CERTIFIED www.tuv.com ID 1111220277

PACKAGING INFORMATION

Horizontal packaging	76.4 in 1940 mm	43.3 in 1100 mm	48.0 in 1220 mm	1656 lbs 751 kg	24 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.

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Specifications subject to technical changes **© Q CELLS** Q.PEAK DUO BLK ML-G10+_385-405_DA_2022-02_Rev01_NA

Warranty Specifications

Warranty Specifications

All Q Cells G9+ and G10+ series panels come complete with both a 25-year product and performance warranty.

The product warranty ensures all solar panels to be free of defects. The performance warranty guarantees 98% of nominal power rating during the first year. Thereafter a maximum rate of degradation not to exceed .5% per year is guaranteed. At ten years, you will retain at least 93.5% of your rated nominal power and at 25 years your solar panels will retain at least 86% of their energy producing potential.

Specification

Solar Panel Configuration	
Cell Type	Monocrystalline
Panel Aesthetics	Black Cell, Black Frame, Black Backsheet
Panel Dimensions	1879 X 1045 X 32mm
Power Rating	410W
Snow load	5400 Pa
Wind Load	4000 Pa
Solar Panel Warranty	
Linear Production Warranty Term	25 Years
Product Warranty Term	25 Years
PV Product Performance	
Efficiency	20.4%
Max Power Output	400W
Power Tolerance	0/+5W
Temperature Coefficient	PMax: -0.34
Others	
Average Cost / Watt	$2 .90
Where it’s Made	Made in USA