

Q.PLUS-G3 270-280

Q.ANTUM SOLAR MODULE

The new high-performance module **Q.PLUS-G3** is the ideal solution for all applications thanks to its innovative cell technology **Q.ANTUM**. The world-record cell design was developed to achieve the best performance under real conditions - even with low radiation intensity and on clear, hot summer days. **Q.PLUS-G3** is distinguished by optimal output yield, operating reliability and durability, as well as a more intelligent design and quick installation.

INNOVATIVE ALL-WEATHER TECHNOLOGY

- Maximum yields with excellent low-light and temperature behaviour.
- World-record cell concept Q.ANTUM.

ENDURING HIGH PERFORMANCE

- Long-term Yield Security due to Anti PID Technology¹, Hot-Spot Protect, and Traceable Quality Tra.Q™.
- Long-term stability due to VDE Quality Tested – the strictest test program.

SAFE ELECTRONICS

- Protection against short circuits and thermally induced power losses due to breathable junction box and welded cables.
- Increased flexibility due to MC4-inter-mateable connectors.proof.

THE IDEAL SOLUTION FOR:



Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants



Rooftop arrays on residential buildings

PROFIT-INCREASING GLASS TECHNOLOGY

- Reduction of light reflection by 50%, plus long-term corrosion resistance due to high-quality »Sol-Gel roller coating« processing.

LIGHTWEIGHT QUALITY FRAME

- Stability at wind loads of up to 5400 Pa with a module weight of just 19 kg due to slim frame design with high-tech alloy.

MAXIMUM COST REDUCTIONS

- Up to 31 % lower logistics costs due to higher module capacity per box.

EXTENDED WARRANTIES

- Investment security due to 12-year product warranty and 25-year linear performance warranty².

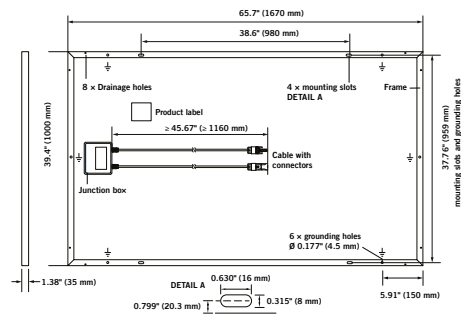


¹ APT test conditions: Cells at -1000V against grounded, with conductive metal foil covered module surface, 25°C, 168h

² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	65.7 in x 39.4 in x 1.38 in (including frame) (1670 mm x 1000 mm x 35 mm)
Weight	41.89 lb (19.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodized aluminum
Cell	6 x 10 Q.ANTUM cells
Junction box	4.33 in x 4.53 in x 0.9 in (110 mm x 115 mm x 23 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 45.67 in (1160 mm), (-) ≥ 45.67 in (1160 mm)
Connector	SOLARLOK PV4, IP68



ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W/m², 25°C, AM 1.5 G SPECTRUM)¹

NOMINAL POWER (+5W/-0W)	[W]	270	275	280
Average Power	P_{MPP} [W]	272.5	277.5	282.5
Short Circuit Current	I_{SC} [A]	9.48	9.55	9.62
Open Circuit Voltage	V_{OC} [V]	38.86	39.14	39.41
Current at P_{MPP}	I_{MPP} [A]	8.85	8.93	9.00
Voltage at P_{MPP}	V_{MPP} [V]	30.78	31.08	31.38
Efficiency (Nominal Power)	η [%]	≥ 16.2	≥ 16.5	≥ 16.8

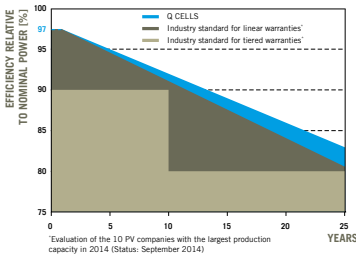
PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 45 ± 3°C, AM 1.5 G SPECTRUM)²

NOMINAL POWER (+5W/-0W)	[W]	270	275	280
Average Power	P_{MPP} [W]	201.2	204.9	208.6
Short Circuit Current	I_{SC} [A]	7.64	7.70	7.76
Open Circuit Voltage	V_{OC} [V]	36.27	36.52	36.78
Current at P_{MPP}	I_{MPP} [A]	6.93	6.99	7.05
Voltage at P_{MPP}	V_{MPP} [V]	29.03	29.31	29.59

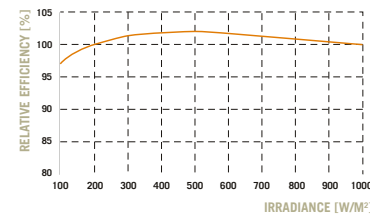
¹ Measurement tolerances STC: ± 3% (P_{MPP}); ± 10% (I_{SC} , V_{OC} , I_{MPP} , V_{MPP})

² Measurement tolerances NOCT: ± 5% (P_{MPP}); ± 10% (I_{SC} , V_{OC} , I_{MPP} , V_{MPP})

Q CELLS PERFORMANCE WARRANTY



PERFORMANCE AT LOW IRRADIANCE



The typical change in module efficiency at an irradiance of 200 W/m² in relation to 1000 W/m² (both at 25°C and AM 1.5 G spectrum) is -0% (relative).

TEMPERATURE COEFFICIENTS (AT 1000 W/M², 25°C, AM 1.5 G SPECTRUM)

Temperature Coefficient of I_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.29
Temperature Coefficient of P_{MPP}	γ [%/K]	-0.41	NOCT	[°F]	116 ± 5.4 (45 ± 3°C) (113 ± 5.4 °F)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000 (IEC) / 600 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C
Max Load (UL)²	[lbs/ft ²]	75 (3600 Pa)	Permitted module temperature on continuous duty	-40°F up to +185°F (-40°C up to +85°C)
Load Rating (UL)²	[lbs/ft ²]	75 (3600 Pa)	² see installation manual	

QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant;
IEC 61215 (Ed.2); IEC 61730 (Ed.1) application class A



PACKAGING INFORMATION

Number of Modules per Pallet	29
Number of Pallets per 53' Container	32
Number of Pallets per 40' Container	26
Pallet Dimensions (L x W x H)	68.5 in x 44.5 in x 46.0 in (1740 x 1130 x 1170 mm ³)
Pallet Weight	1323 lb (600 kg)

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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