Q.PRIME-G5 270-290

MONOCRYSTALLINE SOLAR MODULE

The new Q.PRIME-G5 is the result of the continued evolution of our monocrystalline solar modules. Thanks to improved power yield, excellent reliability and high-level operational safety, the new Q.PRIME-G5 generates electricity at a low cost (LCOE) and is suitable for a wide range of applications.

SUPERIOR YIELD
High power output thanks to advanced 6-busbar technology and outstanding performance under real-life conditions.

LOW LEVELIZED COST OF ELECTRICITY
Higher yield per surface area, lower BOS costs, higher power classes and an efficiency rate of up to 18.0 %.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behaviour.

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

A RELIABLE INVESTMENT
Inclusive 12-year product warranty and 25-year linear performance warranty[1].

[1] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

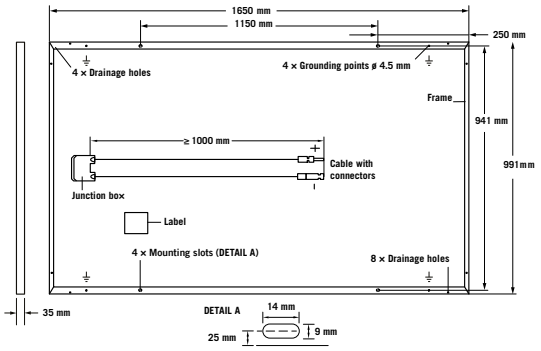
- Rooftop arrays on residential buildings
- Ground-mounted solar power plants
- Rooftop arrays on commercial / industrial buildings

Engineered in **Germany**

Q CELLS

MECHANICAL SPECIFICATION

Format	1650 mm × 991 mm × 35 mm (including frame)
Weight	18 kg ± 5 %
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Multi-layer composite sheet
Frame	Anodised aluminium
Cell	6 × 10 monocrystalline solar cells
Junction box	Protection class IP67 or IP68, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 1000 mm, (–) ≥ 1000 mm
Connector	Multi-Contact MC4, HQC4, Tonglin TL-Cable01S, Amphenol UTX; IP68

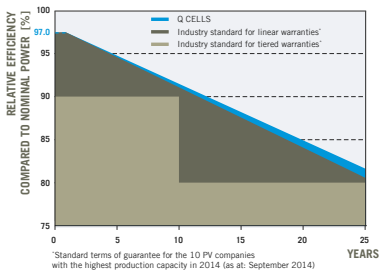


ELECTRICAL CHARACTERISTICS

POWER CLASS				270	275	280	285	290
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W/–0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	270	275	280	285	290
Minimum	Short Circuit Current[1]	I_{SC}	[A]	9.08	9.20	9.30	9.35	9.48
Minimum	Open Circuit Voltage[1]	V_{OC}	[V]	37.8	38.0	38.1	38.3	38.5
Minimum	Current at MPP	I_{MPP}	[A]	8.63	8.74	8.84	8.94	9.04
Minimum	Voltage at MPP	V_{MPP}	[V]	31.3	31.5	31.7	31.9	32.1
Minimum	Efficiency[1]	η	[%]	≥16.5	≥16.8	≥17.1	≥17.4	≥17.7
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	200	204	208	212	215
Minimum	Short Circuit Current	I_{SC}	[A]	7.34	7.43	7.51	7.55	7.66
Minimum	Open Circuit Voltage	V_{OC}	[V]	35.70	35.90	36.00	36.20	36.40
Minimum	Current at MPP	I_{MPP}	[A]	6.90	6.99	7.06	7.14	7.22
Minimum	Voltage at MPP	V_{MPP}	[V]	29.0	29.2	29.4	29.6	29.8

[1]Measurement tolerances P_{MPP} ±3 %; I_{SC}; V_{OC} ±5 % at STC: 1000 W/m², 25±2 °C, AM 1.5 G according to IEC 60904-3 • [2]800 W/m², NMOT, spectrum AM 1.5 G

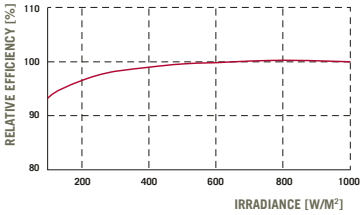
Q CELLS PERFORMANCE WARRANTY



At least 97.0 % of nominal power during first year. Thereafter max. 0.7 % degradation per year.
At least 90.7 % of nominal power up to 10 years.
At least 81.5 % 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 organization 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]	+0.05	**Temperature Coefficient of V_{OC}**	β	[%/K]	–0.31
Temperature Coefficient of P_{MPP}	γ	[%/K]	–0.40	**Normal Module Operating Temperature**	NMOT	[°C]	43±3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS}	[V]	1000	**Safety Class**	II
Maximum Reverse Current	I_R	[A]	20	**Fire Rating**	C
Max. Design Load, Push/Pull		[Pa]	3600/2667	**Permitted Module Temperature On Continuous Duty**	–40 °C up to +85 °C
Max. Test Load, Push/Pull		[Pa]	5400/4000		

QUALIFICATIONS AND CERTIFICATES

IEC 61215:2016; IEC 61730:2016, Conformity to CE, Application Class II
This data sheet complies with DIN EN 50380.

PARTNER

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 China

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