GROUND-MOUNTED SOLAR POWER PLANTS

ROOFTOP ARRAYS ON LARGE COMMERCIAL AND INDUSTRIAL BUILDINGS

MULTICRYSTALLINE SOLAR MODULE

Q.BASE 215-230

High performance for large-scale solar arrays

Q-Cells is now applying the skills perfected over years of solar cell manufacture to solar module production. Q.BASE modules guarantee efficient plant operation, especially for large-scale arrays.

GERMAN ENGINEERING FOR RELIABLE YIELDS:

- Maximum efficiency through the use of multicrystalline solar cells, manufactured in-house, with high cell efficiencies
- High output due to excellent performance in low-light conditions – even under the most challenging circumstances

STURDY, WEATHER-RESISTANT CONSTRUCTION:

- Protection against overheating includes a junction box with integrated bypass diodes and 100% hotspot-free cells
- Approved for increased snow and wind loads up to 5400 Pa, with tempered glass and a flex-resistant frame
- Long-term weather resistance with integrated drainage holes in the frame

SIMPLE, COST-EFFECTIVE INSTALLATION:

- Compatible with all the latest standard, commercially available inverters and mounting systems
- Minimal wiring effort required, as the module itself has high reverse current resistance (25A)

STEADY, GUARANTEED PERFORMANCE:

- 10-year product warranty
- 25-year performance warranty*
- Free module recycling through membership in the PV Cycle Association**

* 90 % OF THE INITIAL EFFICIENCY UP TO 10 YEARS, 80 % UP TO 25 YEARS

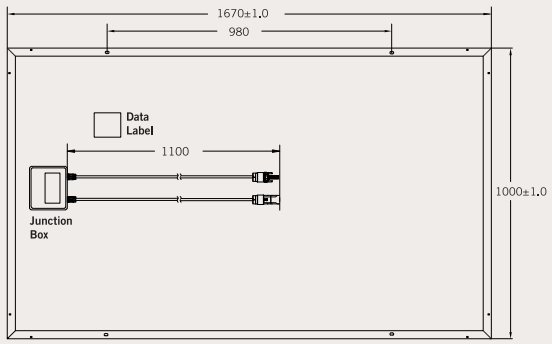
** IN PV CYCLE MEMBER COUNTRIES ONLY, SEE: WWW.PVCYCLE.COM

Q.CELLS

MECHANICAL SPECIFICATION

Format	1670 x 1000 x 50 mm (including frame)
Weight	21 kg
Front Cover	Thermally pre-stressed solar glass
Back Cover	Composite film
Frame	Anodized aluminum
Cell Type	Multicrystalline solar cells with 3 busbars (156 mm x 156 mm)
Number of cells	6 x 10
Junction box	Protection class IP 65, with bypass diodes
Cable length	(+) 1100 mm; (-) 1100 mm
Cable type	Solar cable 4 mm²
Connector	Linyang

TECHNICAL DRAWING



ELECTRICAL CHARACTERISTICS

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

POWER CLASS			205	210	215	220	225	230	235	240
Nominal Power (+/-2.5 Wp)	P_{MAX}	[W]	205	210	215	220	225	230	235	240
Short Circuit Current	I_{SC}	[A]	7.95	8.00	8.10	8.20	8.25	8.30	8.35	8.50
Open Circuit Voltage	V_{OC}	[V]	35.50	35.60	35.80	36.00	36.40	36.60	36.80	37.00
Current at Maximum Power	I_{MPP}	[A]	7.35	7.40	7.50	7.60	7.65	7.75	7.80	8.00
Voltage at Maximum Power	V_{MPP}	[V]	28.05	28.40	28.60	29.00	29.40	29.65	29.90	30.00

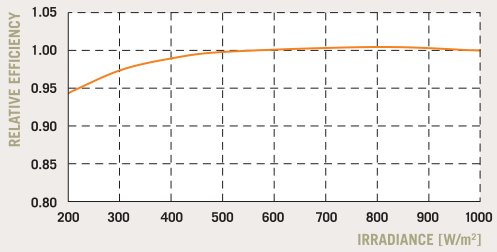
The measuring tolerance is +/- 3 % referred to the measured performance.

PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 47±3 °C, AM 1.5 SPECTRUM)

POWER CLASS			205	210	215	220	225	230	235	240
Nominal Power (+/-2.5 Wp)	P_{MAX}	[W]	152.7	155.4	156.9	159.9	163.4	166.2	169.4	172.7
Short Circuit Current	I_{SC}	[A]	6.51	6.56	6.59	6.61	6.68	6.71	6.77	6.84
Open Circuit Voltage	V_{OC}	[V]	32.44	32.61	32.68	32.82	33.00	33.19	33.45	33.71
Current at Maximum Power	I_{MPP}	[A]	5.98	6.03	6.05	6.08	6.17	6.22	6.28	6.33
Voltage at Maximum Power	V_{MPP}	[V]	25.56	25.80	25.99	26.32	26.54	26.76	27.04	27.31

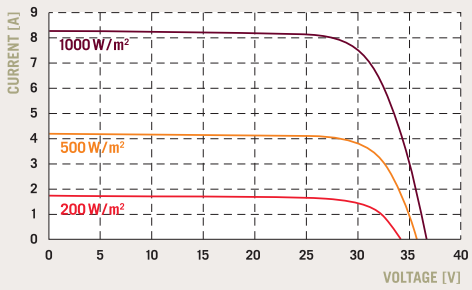
The measuring tolerance is +/- 5 % referred to the measured performance.

PERFORMANCE AT LOW IRRADIANCE



The typical relative 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 spectrum) is less than 6 %.

TYPICAL CHARACTERISTICS AT DIFFERENT TEMPERATURES AND IRRADIANCES



TEMPERATURE COEFFICIENTS (AT 1000 W/m², 25 °C, AM 1.5 SPECTRUM)

Temperature Coefficient of I_{SC}	α	[%/K]	+0.06	**Temperature Coefficient of V_{OC}**	β	[%/K]	−0.36
Temperature Coefficient of P_{MAX}	γ	[%/K]	−0.43				

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000	**Safety Class**	II
Maximum Reverse Current I_R	[A]	25	**Fire Rating**	C
Wind / Snow Load	[Pa]	5400	**Permitted operating temperature on continous duty**	-40 °C up to +85 °C

QUALIFICATIONS AND CERTIFICATES

CE-Compliant; IEC 61215 (Ed.2); IEC 61730 (Ed.1)

Safety Class II

PARTNER

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

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