

PHOTOVOLTAIC MODULES

MAGE POWERTEC PLUS Mono

MAGE POWERTEC PLUS convinces by:

1. Flexible Planning

- › Modules for all installation sizes
- › Maximum efficiency
- › Suitable for use in coastal and agricultural areas

2. Easy Installation

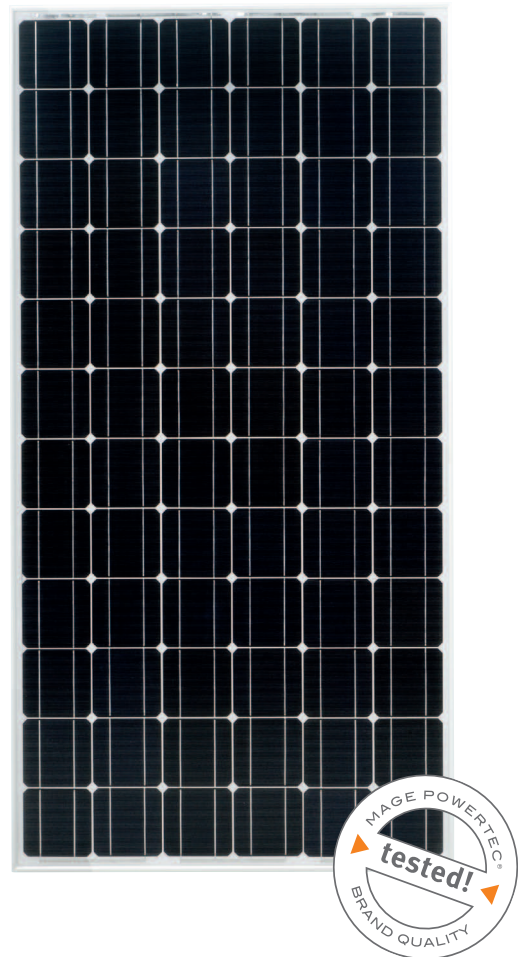
- › Low weight, convenient format
- › Horizontal and vertical installation possible
- › Optimal utilisation of the roof surface

3. Maximum Yield

- › Top annual result in the PHOTON yield test
- › Only positive tolerances of up to 5 Wp
- › Only the best performance

4. Long Lifetime

- › Product guarantee: 10 years
- › Performance guarantee: 12 years at 90 % and 30 years at 80 %
- › Certified according to the strictest German and international standards



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Electrical characteristics at STC*		185	190	195	200
Nominal power	P_{nom} [Wp]	185	190	195	200
Tolerance of P_{nom}	P [Wp]	-0/+5	-0/+5	-0/+5	-0/+5
Voltage at P_{nom}	U_{nom} [V]	36.20	36.40	36.60	36.90
Current at P_{nom}	I_{nom} [A]	5.12	5.23	5.35	5.43
Short circuit current	I_{sc} [A]	5.50	5.60	5.70	5.90
Open circuit voltage	U_{oc} [V]	44.90	45.00	45.10	45.30
Maximum system voltage	U_{syst} [V]	1000	1000	1000	1000
Reverse current	I_r [A]	10	10	10	10

*Typical parameters at standard test conditions (STC): 1,000 W/m² irradiation on the module surface, 25° C module temperature, 1.5 AM spectral diffusion of irradiation simulating Air-Mass.

Electrical characteristics at NOCT**		185	190	195	200
Nominal power	P_{noct} [Wp]	133.82	137.53	141.27	144.69
Voltage at P_{noct}	U_{noct} [V]	32.88	33.06	33.24	33.51
Current at P_{noct}	I_{noct} [A]	4.07	4.16	4.25	4.32
Short circuit current	I_{sc} [A]	4.39	4.47	4.55	4.71
Open circuit voltage	U_{oc} [V]	40.47	40.56	40.65	40.83

**Typical parameters at nominal operating cell temperature (NOCT): 800 W/m² irradiation conditions, 20° C ambient temperature, 1 m/s wind speed.

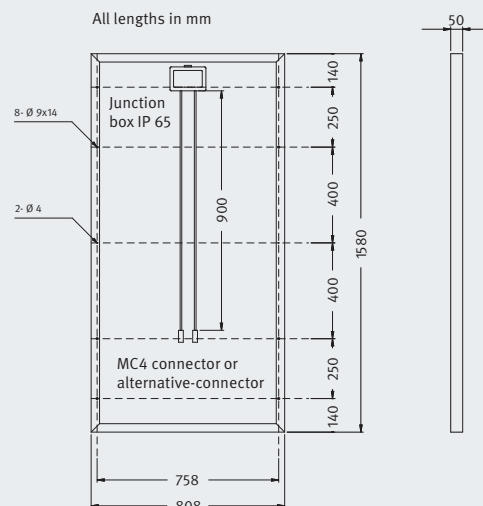
Efficiency		185	190	195	200
Cell efficiency up to [%]		17.30	17.80	18.30	18.50
Module efficiency up to [%]		14.88	15.27	15.67	16.06

Minimal efficiency reduction in low irradiation at 25° C: at 200 W/m² irradiation a minimal efficiency reductions occurs, this leads to a functionality of 96% of the STC efficiency.

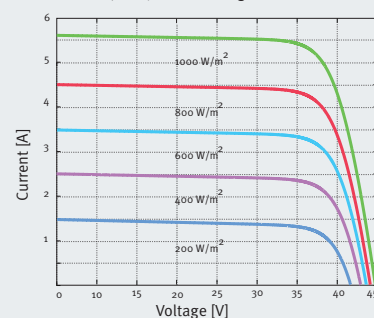
Technical characteristics***	
Number of cells (Matrix)	72 (6 x 12)
Solar cell type	Monocrystalline silicon, 125 x 125 mm, 5"
Front cover	3.2 mm solar glass
Frame material	Aluminium
Dimensions [L x W x D]	1580 x 808 x 50 mm
Weight up to	16.5 kg
Maximum mechanical load	5400 Pa (IEC 61215)
Number of bypass diodes	3

***Typical technical specifications

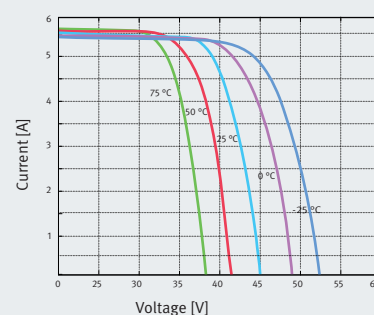
Thermal characteristics		
NOCT	[°C]	+46 +/-3
Temperature coefficient	I _{sc} [%/K]	+0.05
Temperature coefficient	U _{oc} [%/K]	-0.35
Temperature coefficient	P _{nom} [%/K]	-0.46



Module characteristics at constant module temperatures (25° C) and differing levels of irradiance



Module characteristics at different temperatures and constant module irradiance (1.000 W/m2)



IEC 61215, IEC 61730, IEC 61701, UL 1703, ISO 9001
Dependent on market and/or product

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