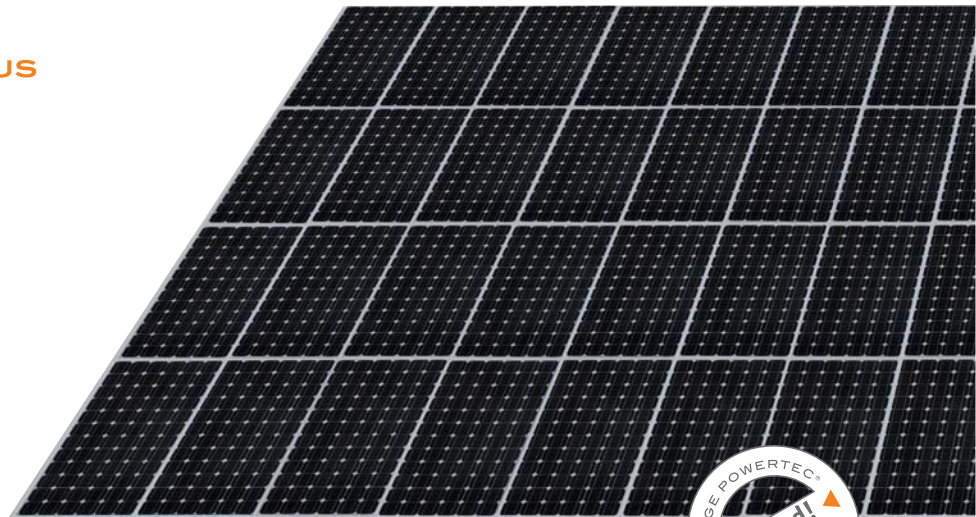
 **MAGE  
POWERTEC<sup>®</sup> PLUS**  
Solar Modules

MAGE POWERTEC<sup>®</sup> Plus  
175/5MH, 180/5MH, 185/5MH



#### More power

MAGE POWERTEC<sup>®</sup> Plus modules use a monocrystalline cell technology with an electrical efficiency of up to 17.3%.

Allowable tolerances of up to +5 watts guarantee maximum power without compromise. The nominal power is always obtained or even exceeded.

#### More quality

The 10-year product warranty far surpasses legal requirements. MAGE POWERTEC<sup>®</sup> Plus modules go far beyond competitors' standards with the added guarantee that they'll produce 90% of their nominal power for 12 years and 80% for 30 years. That is three full decades of reassurance.

Certifications according to the most rigorous North American and international standards guarantee maximum quality.

In addition, every MAGE POWERTEC<sup>®</sup> Plus module passes rigorous optical, mechanical, and electrical quality controls.

#### More security

Due to their engineered hollow-section frame and 3.2 mm (0.13 in) special solar glass, MAGE POWERTEC<sup>®</sup> Plus modules meet maximum demands with regard to stability and corrosion resistance. The high-quality EVA foil allows ideal embedding of the solar cells, while the weatherproof foil on the back of the modules protects against humidity.

To avoid overheating of the individual solar cells (hot-spot effect), a junction box with bypass diodes is placed on the back of the module. In addition, the extremely robust modules resist a maximum pressure of 5,400 Pa/113 psf.

**+5** Watts Positive Tolerances

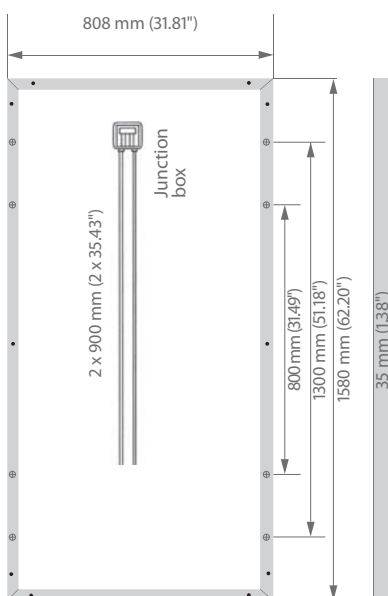
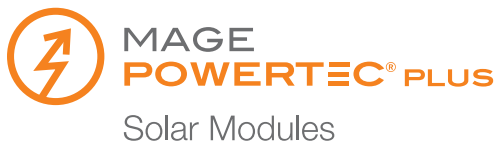
**10** Year Product Warranty

**12** Year 90% Power Guarantee

**30** Year 80% Power Guarantee



## MAGE POWERTEC® Plus 175/5MH, 180/5MH, 185/5MH



Technical Facts	175/5MH	180/5MH	185/5MH
Number of Cells (Matrix)	72 (6 x 12)	72 (6 x 12)	72 (6 x 12)
Solar Cell Type	monocrystalline	monocrystalline	monocrystalline
Solar Cell Size (mm)	125 x 125	125 x 125	125 x 125
Solar Cell Size (in)	5 x 5	5 x 5	5 x 5
Dimensions (L x W x D mm)	1580 x 808 x 35	1580 x 808 x 35	1580 x 808 x 35
Dimensions (L x W x D in)	62.20 x 31.81 x 1.38	62.20 x 31.81 x 1.38	62.20 x 31.81 x 1.38
Weight (kg)	15.00	15.00	15.00
Weight (lbs)	33.07	33.07	33.07
Fire Rating	C	C	C

Electrical Characteristics*		175/5MH	180/5MH	185/5MH
Maximum Power Rating	$P_{max}$ [Wp]	175	180	185
Tolerance of $P_{max}$	$P$ [Wp]	-0/+5	-0/+5	-0/+5
Maximum Power Voltage of $P_{max}$	$U_{mpp}$ [V]	35.87	36.02	36.42
Maximum Power Current $P_{max}$	$I_{mpp}$ [A]	4.88	5.00	5.08
Short Circuit Current	$I_{sc}$ [A]	5.21	5.30	5.40
Open Circuit Voltage	$U_{oc}$ [V]	44.40	44.80	45.00
Module Efficiency	[%]	13.90	14.30	14.69
Cell Efficiency	[%]	16.36	16.83	17.30
Maximum System Voltage	[V]	600	600	600

\* STC @ 25° C (77° F), 1000 W/m<sup>2</sup>, AM 1.5

Thermal Characteristics		175/5MH	180/5MH	185/5MH
NOCT	[°C]	+45 +/-2	+45 +/-2	+45 +/-2
NOCT	[°F]	+113.00 +/-3.6	+113.00 +/-3.6	+113.00 +/-3.6
Temperature Coefficient	$I_{sc}$ [%/K]	+0.09	+0.09	+0.09
Temperature Coefficient	$U_{oc}$ [%/K]	-0.34	-0.34	-0.34
Temperature Coefficient	$P_{max}$ [%/K]	-0.37	-0.37	-0.37

### Guarantees and Certificates

Product Warranty	10 years
Power Guarantee 90%	12 years
Power Guarantee 80%	30 years

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ISO 9001, UL 1703,  
ULC ORD 1703, IEC 61215,  
IEC 61730

FSEC Listed  
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