


# MCB full black solar panels

autarco

The Autarco MC series solar panels are based on high efficiency monocrystalline PERC cells with five bus-bars (5BB) in a 6x10 layout. The resulting rated power of up to 310Wp and Autarco's extra focus on consistent cell color, make this the module of choice for the residential market where roof space is limited and an aesthetic finish is desired.

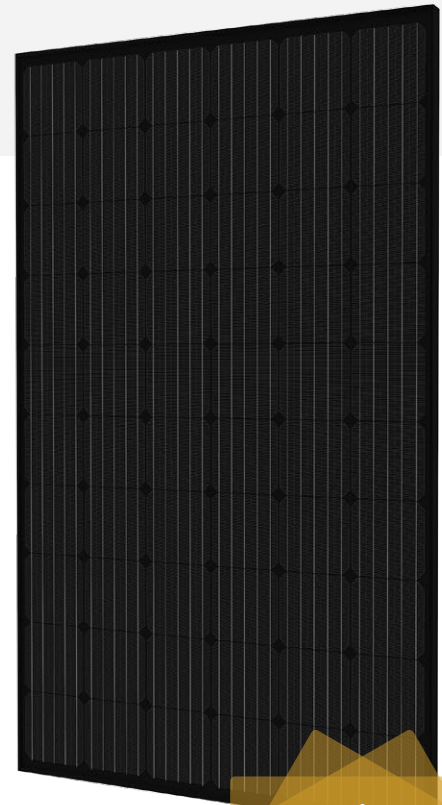
**25** Insured linear 25-year performance guarantee up to 80.2%

**10** 10-year product warranty

 Salt and ammonia resistant

 Free of potential induced degradation (PID)

 Color consistent deep dark cells



## Quality certificates

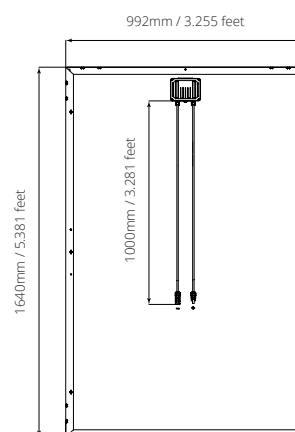
- IEC 61215, IEC61730, VDE, CE, MCS, CEC AU, UL1703
- ISO 9001, 14001, 18001 - CE
- Solarif, PV-Cycle



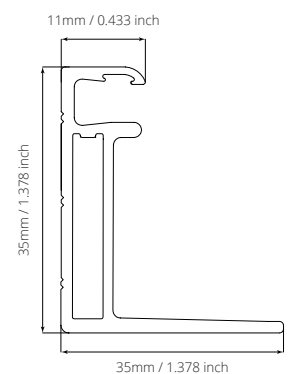
## Cells and construction

<b>Cells</b>	60 cells (157 x 157mm) in a 6 x 10 matrix connected in series
<b>Junction box</b>	IP67 box with 1000mm 4mm <sup>2</sup> cable fitted with MC4 connectors
<b>Diodes</b>	Three by-pass diodes
<b>Construction</b>	Front: 3.2mm glass Back: Composite Film (black) Encapsulant: EVA (black)
<b>Frame</b>	Anodized aluminium (black)
<b>Weight</b>	18kg
<b>Dimensions</b>	1640 x 992 x 35mm

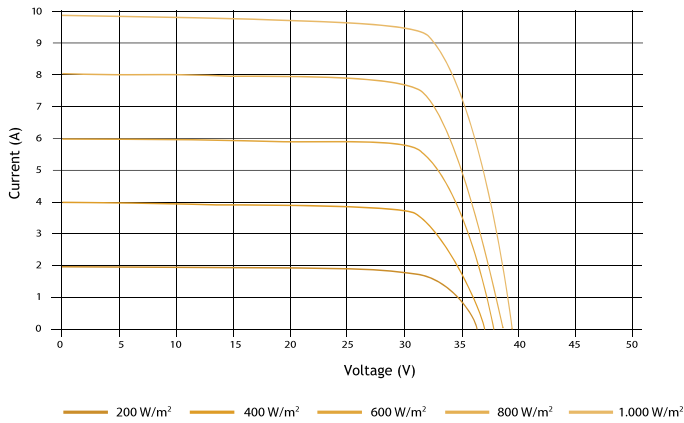
Panel



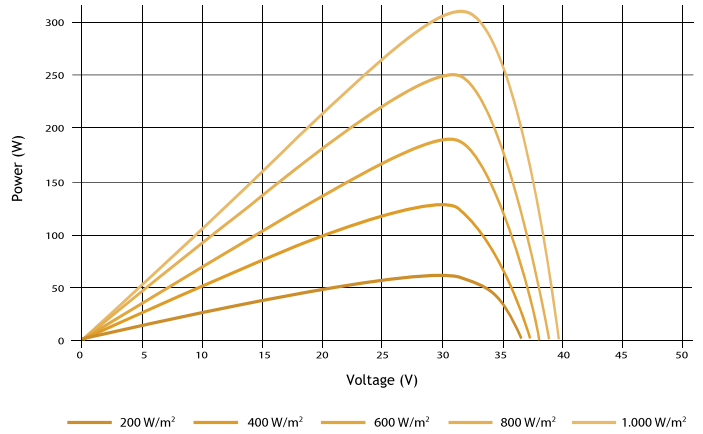
Frame cross section



## IV curve



## Power curve



## Electrical characteristics

		MC290B	MC295B	MC300B	MC305B	MC310B
<b>Nominal power output (Wp)</b>	(Pmax)	290	295	300	305	310
<b>Power output tolerance (W)</b>	(ΔPmax)	0/+5	0/+5	0/+5	0/+5	0/+5
<b>Open circuit voltage (V)</b>	(Voc)	39.31	39.45	39.65	39.77	39.84
<b>Short circuit current (A)</b>	(Isc)	9.59	9.68	9.74	9.85	9.93
<b>Max. power voltage (V)</b>	(Vmp)	32.02	32.25	32.44	32.63	32.75
<b>Max. power current (A)</b>	(Imp)	9.06	9.15	9.25	9.36	9.48
<b>Module efficiency (%)</b>	(η)	17.80	18.10	18.40	18.70	19.10

Electrical values at standard test conditions (STC): irradiation 1000W/m<sup>2</sup>, air density AM1.5 and cell temperature 25°C  
 Max string voltage: 1000V, max series fuse: 15A

## Temperature characteristics

<b>Isc (α)</b>	+0.060% / °C
<b>Voc (β)</b>	-0.280% / °C
<b>Pmax (γ)</b>	-0.380% / °C
<b>Nominal cell temperature</b>	44°C (+/- 2°C)

## Other characteristics

<b>Operating temperature range</b>	-40°C to 85°C
<b>Max. load (front / wind)</b>	5400 / 2400 Pa
<b>Ammonia and salt resistance</b>	IEC 62716, 61701
<b>Max. hailstone impact</b>	25mm @ 23m/s
<b>Standard packaging</b>	30 pcs
<b>Quantity per 40'HQ container</b>	840 pcs

The specifications contained in this datasheet may deviate slightly from our actual products due to on-going product improvement and are subject to change at any time without prior notice.

