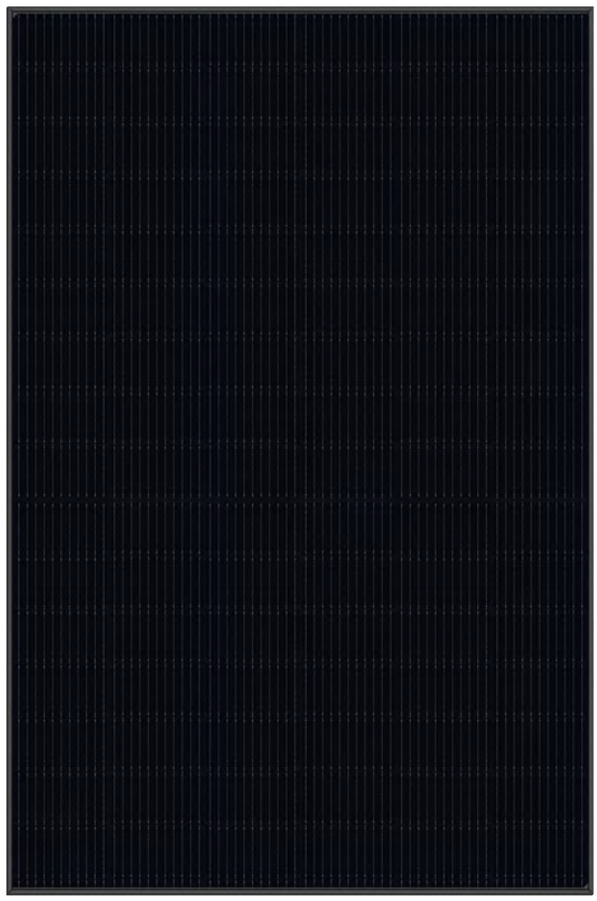
MHJ Full Black series solar panels

autarco

Autarco's MHJ Full Black series solar panels use halfcut monocrystalline PERC cells with advanced multi-wire technology to deliver higher efficiency without compromising on reliability at a rated voltage of 1500V DC. The ability to withstand mechanical loads of up to 5400 Pa, combined with superior resistance to sand, salt and ammonia delivers long lasting performance in even the harshest environments.



- **25** Insured linear 25-year power output guarantee up to 84.8%
  12-year product warranty for materials and processing
- Multiwire technology for superior reliability and performance
- Halfcut PERC technology for reduced resistance loss and improved shade tolerance
- PID resistant
- Aesthetic cell colour consistency and hail resistant durability (45mm @ 30 m/s)

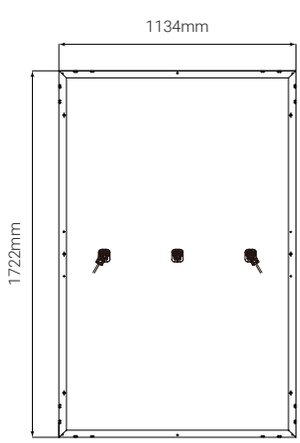
QUALITY CERTIFICATES

- IEC 61215, IEC 61730, C US, CNAS, IEC/TS 62941
- ISO 9001, ISO 14001, OHSAS 18001, CE

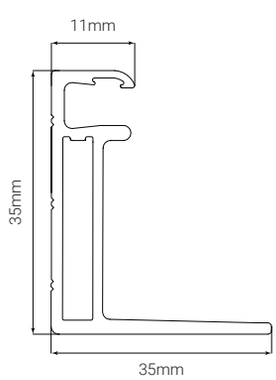
CELLS AND CONSTRUCTION

Cells	108 cells (182 x 91 mm) in a 2 x 6 x 9 matrix connected in series
Junction box	IP rating: IP68 Cable length: 1000mm Connector: PV Connector
Diodes	3 by-pass diodes
Construction	Front: 3.2mm glass (coated) Backsheet: PET/F-coating (black) Encapsulant: EVA
Frame	Anodized aluminum
Weight	23.0 kg
Dimensions	1722 x 1134 x 35mm

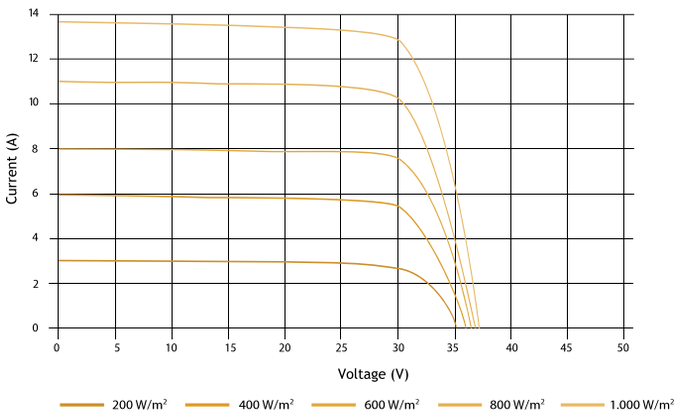
Solar panel



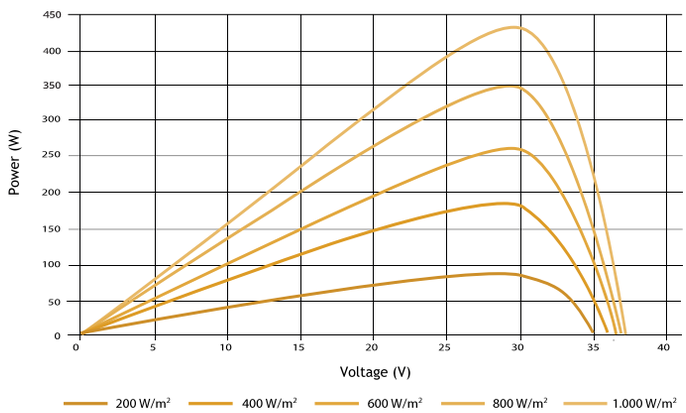
Frame cross section



IV CURVE



POWER CURVE



ELECTRICAL CHARACTERISTICS

		S1.MHJ395B	S1.MHJ400B	S1.MHJ405B	S1.MHJ410B	S1.MHJ415B
Power output (Wp) *	(Pmax)	395	400	405	410	415
Power output tolerance (W)	(ΔPmax)	0/+3W	0/+3W	0/+3W	0/+3W	0/+3W
Open circuit voltage (V) at STC	(Voc)	36.67	36.87	37.05	37.23	37.42
Short circuit current (A) at STC	(Isc)	13.42	13.52	13.62	13.72	13.82
Max. power voltage (V) at STC	(Vmax)	30.67	30.85	31.02	31.18	31.35
Max. power current (A) at STC	(Imax)	12.88	12.97	13.06	13.15	13.24
Open circuit voltage (V) at NOCT	(Voc)	34.62	34.81	34.98	35.15	35.32
Short circuit current (A) at NOCT	(Isc)	10.84	10.92	11.00	11.09	11.17
Max. power voltage (V) at NOCT	(Vmax)	28.24	28.40	28.55	28.71	28.86
Max. power current (A) at NOCT	(Imax)	10.41	10.48	10.55	10.63	10.70
Module efficiency (%)	(η)	20.23	20.48	20.74	21.00	21.25
Maximum system voltage (V)		1500	1500	1500	1500	1500
Maximum series fuse rating (A)		25	25	25	25	25

* Electrical values at Standard Test Conditions (STC): irradiation 1000W/m², air density AM1.5 and cell temperature 25ºC
* Electrical values at Nominal Operating Cell Temperature (NOCT): 800W/m², air density AM1.5 and cell temperature 20ºC, wind speed 1m/s

TEMPERATURE CHARACTERISTICS

Isc (α)	+0.05% / °C
Voc (β)	-0.28% / °C
Pmax (γ)	-0.35% / °C
Nominal operating cell temperature	45°C (+/- 2°C)

OTHER CHARACTERISTICS

Operating temperature	-40°C to 85°C
Max. load	5400 (front) / 2400 Pa (back)
Passed hail test	45mm hail @ 30.7m/s
Fire performance	Class C (IEC) or Type 2 (UL)
Weight of packaging	809 kg
Standard packaging	30 pcs / pallet
Quantity per 40'HQ container	980 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.

