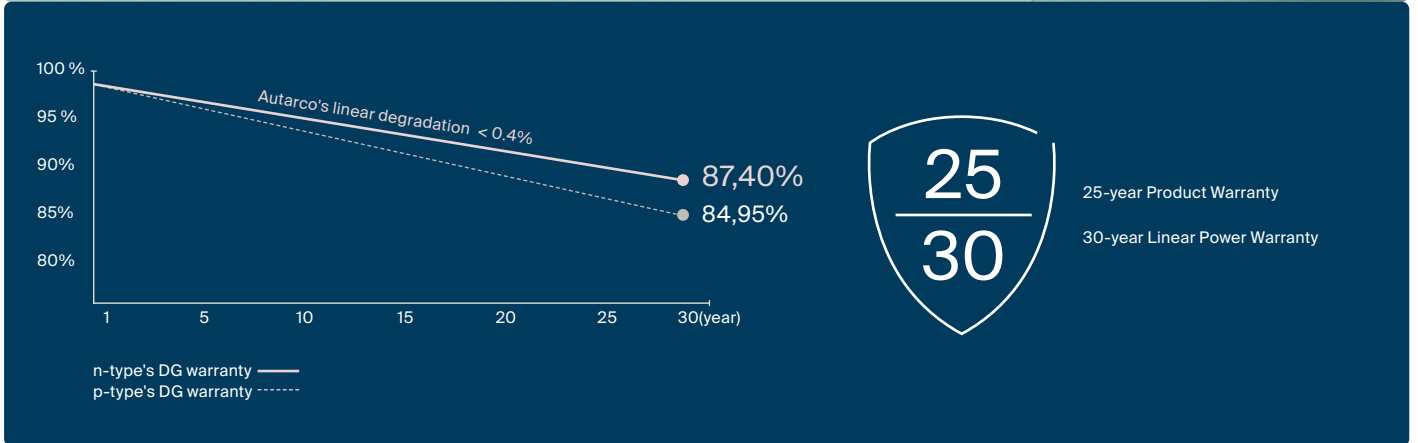
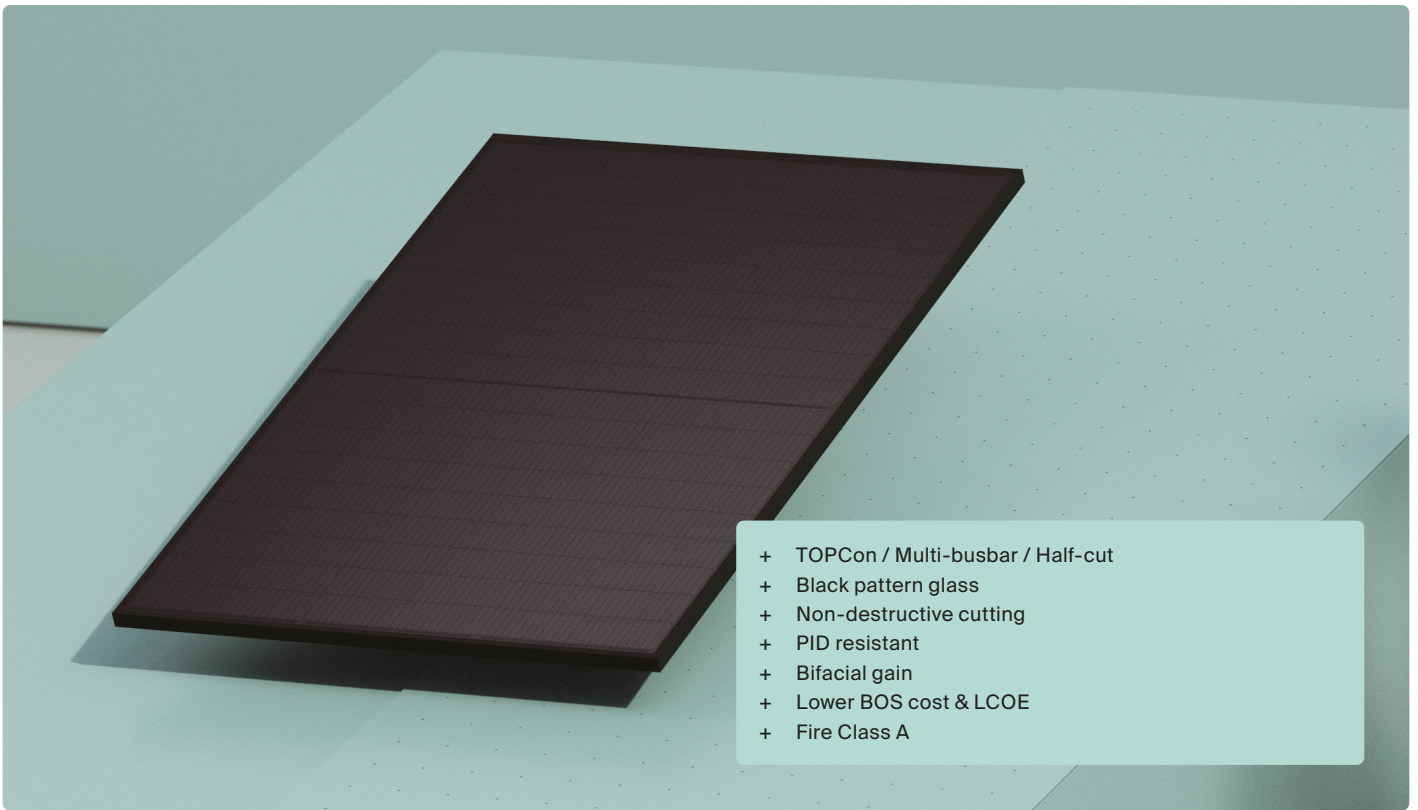


TBJ Full Black

Series solar panels

Reach full potential



420~440W

Power Range

0~+3W

Power Tolerance

22.53%

Max Module Efficiency

≤ 1.0%

First Year Power Degradation

≤ 0.4%

Year 2-30 Power Degradation

Electrical specification

STC: Irradiance 1000W/m², Cell Temperature 25 °C, AM=1.5

Rated output (P _{mpp} / W _p)	420	425	430	435	440
Open circuit voltage (V _{oc} / V)	38.44	38.73	39.03	39.32	39.74
Short circuit current (I _{sc} / A)	13.83	13.89	13.95	14.04	14.11
Rated voltage (V _{mpp} / V)	31.87	32.10	32.34	32.56	32.79
Rated current (I _{mpp} / A)	13.18	13.24	13.30	13.36	13.42
Module efficiency	21.51%	21.76%	22.02%	22.28%	22.53%

NMOT: Irradiance 800W/m², Ambient Temperature 20 °C, AM=1.5, Wind Speed 1m/s

Rated output (P _{mpp} / W _p)	322	325	329	333	337
Open circuit voltage (V _{oc} / V)	36.81	37.08	37.37	37.65	37.93
Short circuit current (I _{sc} / A)	11.14	11.19	11.24	11.31	11.36
Rated voltage (V _{mpp} / V)	30.30	30.52	30.74	30.95	31.17
Rated current (I _{mpp} / A)	10.62	10.66	10.71	10.76	10.81

Temperature ratings

Temp. coefficient (P_{mpp}) -0.29% / °CTemp. coefficient (I_{sc}) +0.04% / °CTempe. coefficient (V_{oc}) -0.25% / °C

Nominal module operating temperature (NMOT) 42°C (+/- 2°C)

Operating parameters

No. of diodes 3

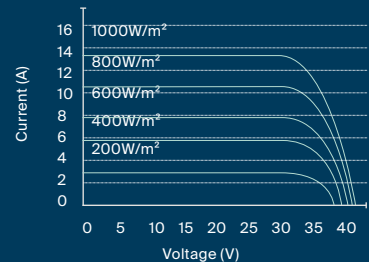
Junction Box IP rating IP 68

Max. series fuse rating 25 A

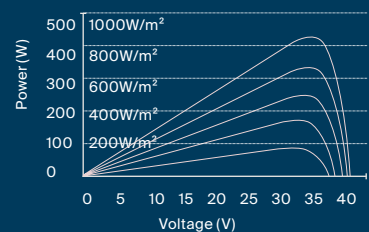
Max. system voltage (IEC/UL) 1500V_{dc}

Curve

Current-Voltage (430W)



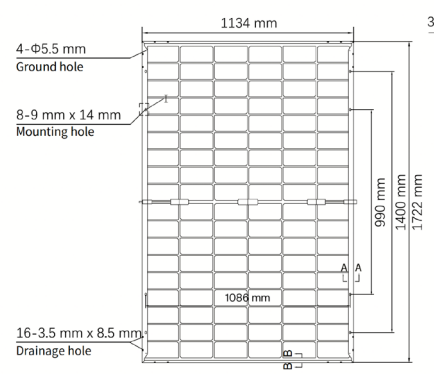
Power-Voltage (430W)



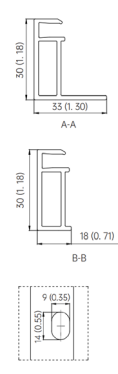
Mechanical specifications

Dimensions (W x H x D)	1722 x 1134 x 30mm
Cells	108 (182 x 91 mm), N type mono-crystalline, in a 6 x 18 matrix connected in series
Frame technology	Aluminum, anodized
Construction	Front: 1.6mm glass (coated) Backsheet: 1.6mm glass (black pattern) Encapsulant: EVA
Cable length (IEC/UL)	1100-1200mm
Cable diameter (IED/UL)	4 mm ² / 12 AWG
Max. mechanical test load	5400 (front) / 2400 Pa (back)
Connector type (IEC/UL)	MC4-EVO2
Operating temperature	-40°C to 85°C
Passed hail test	25 mm hail @ 30.7m/s
Fire performance	Class A (IEC) or Type 2 (UL)
Module weight	21.0 kg
Packing unit	36 pcs / pallet
Weight of packing unit	793 kg
Quantity per 40'HQ container	936 pcs

Solar panel



Frame cross section



1) Refer to Autarco installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

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