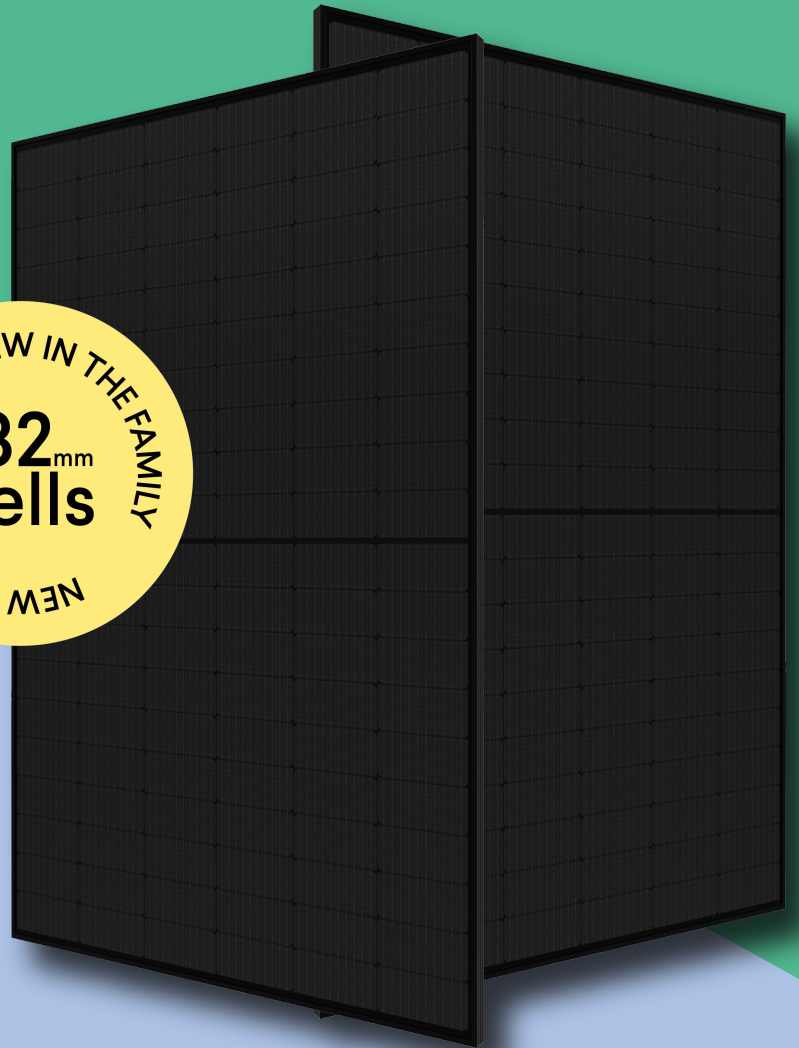


The all black stars



Denim all black 450 Wp



denim

SOLAR, IT'S THAT SIMPLE

ALL BLACK PANELS

Just imagine your roof shining with these all black panels. Black frames, black interior. A little more expensive, but well worth it. Elegant, aesthetic and streamlined. And 25 years guarantee. So what will it be - black or black?

WARRANTY

Always assured of a good yield thanks to the long product warranty of up to 25 years. After 25 years, we guarantee an output of 84,8%.

* 25-year product warranty through a Denim partner. 15-year product warranty through non-Denim partners.



ELECTRICAL CHARACTERISTICS

450 ALL BLACK

		SCT ¹	NOCT ²
Maximum power (Pmax)	(W)	450	335
MPP voltage (Vmpp)	(V)	34,78	32,96
MPP current (Impp)	(A)	12,95	10,16
Open clamp voltage (Voc)	(V)	41,33	39,17
Short-circuit current (Isc)	(A)	13,90	11,22
Module efficiency	(%)	20,8	
Power tolerance	(W)		0 / +5
Operating temperature	(°C)		-40 to +85
Maximum system voltage	(V)		1500
Series fuse rated current	(A)		25
Product reference		Denim U M3 450 BB 120H	

¹ STC (Standard Test Conditions): Irradiance 1000W/m², Cell temperature 25°C, Air mass 1.5

² NOCT (Nominal operating cell temperature): Irradiance 800W/m², Ambient temperature 20°C, Wind speed 1m/s

MECHANICAL PROPERTIES

Cell type	Monocrystalline PERC 182x91 mm
Number of cells	120 cells (6x20)
Dimensions	1909x 1134 x 30 mm
Weight	23,0 kg
Frame	Anodised aluminium
Front plate	Hardened solar glass (high transmission)
Junction Box	IP68
Cable cross section / length	4mm ² (IEC) - 1200mm
Connector type	MC4-Evo2
Fire rating	C

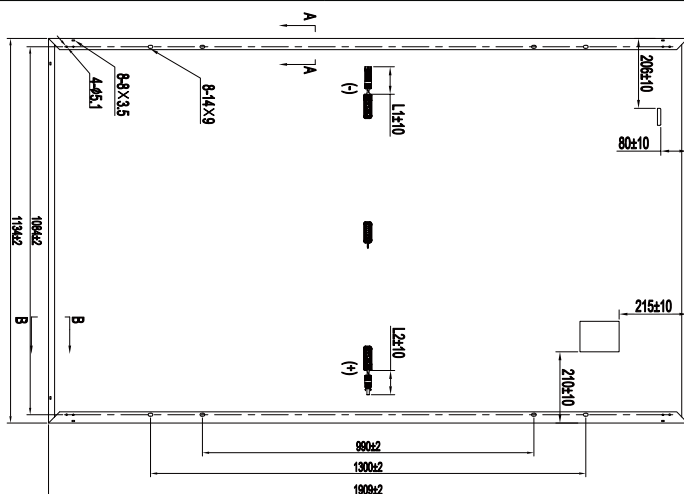
TEMPERATURE COEFF.

Pmax	-0.33%/°C
Voc	-0.26%/°C
Isc	0.042%/°C

NUMBER OF PACKAGES

Quantity per pallet	36
Quantity per container	864

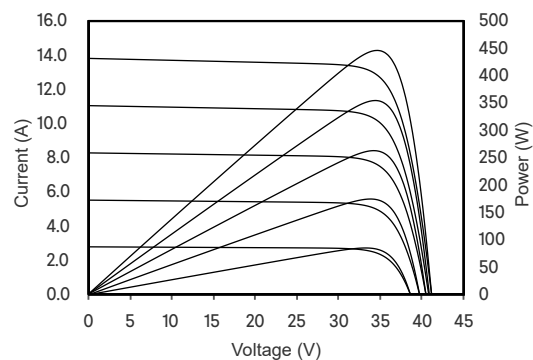
DIMENSIONS



MECHANICAL LOAD

Snow load	Up to 5400 Pa
Wind load	Up to 2400 Pa
Hail test	Hailstones: Ø 25mm, speed: 80 km/h

DENIM IV CURVES



LINEAR PERFORMANCE WARRANTY

