

The All Black stars

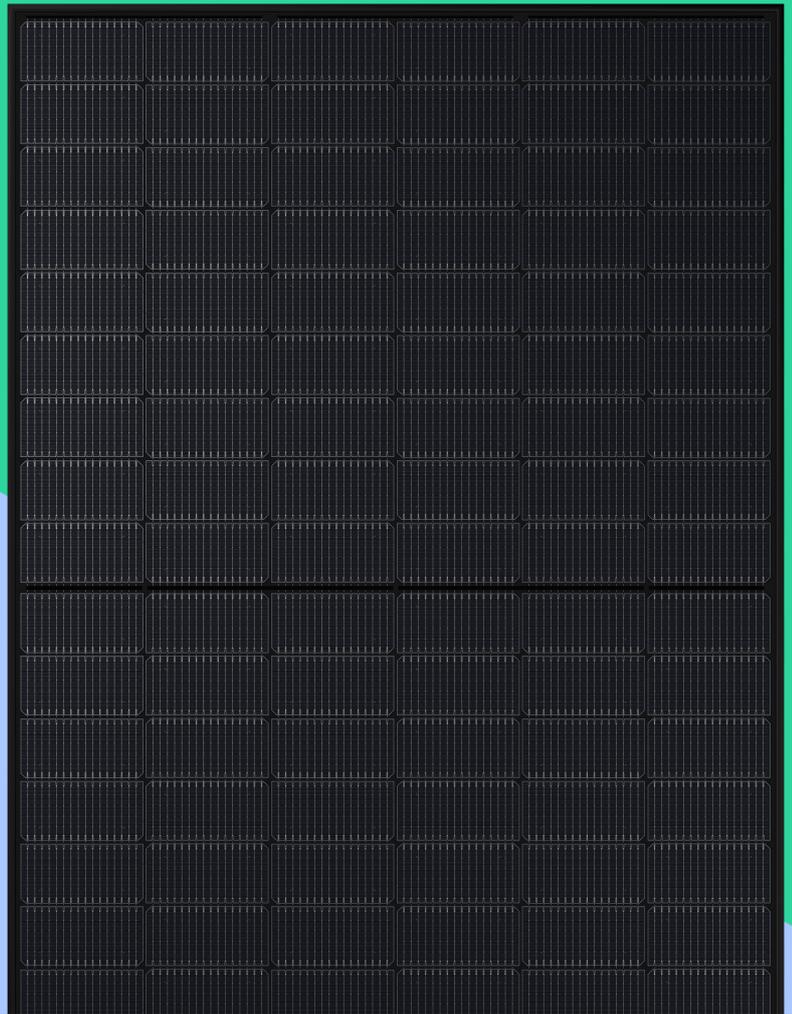


Denim All Black Glass Glass Bifacial 455Wp

455Wp

denim

SOLAR, IT'S THAT SIMPLE



N-TYPE ALL BLACK GLASS GLASS BIFACIAL MODULES

The Denim 455 Wp All Black Glass-Glass is our no-nonsense powerhouse. 108 cells, a compact 2 m² footprint and durable dual-glass construction for long-lasting protection. With its bifacial cells, the module also generates from the rear side for extra yield. Efficient, robust and built to perform for up to 35 years, exactly what you expect from Denim.

PRODUCT CERTIFICATIONS



WARRANTY

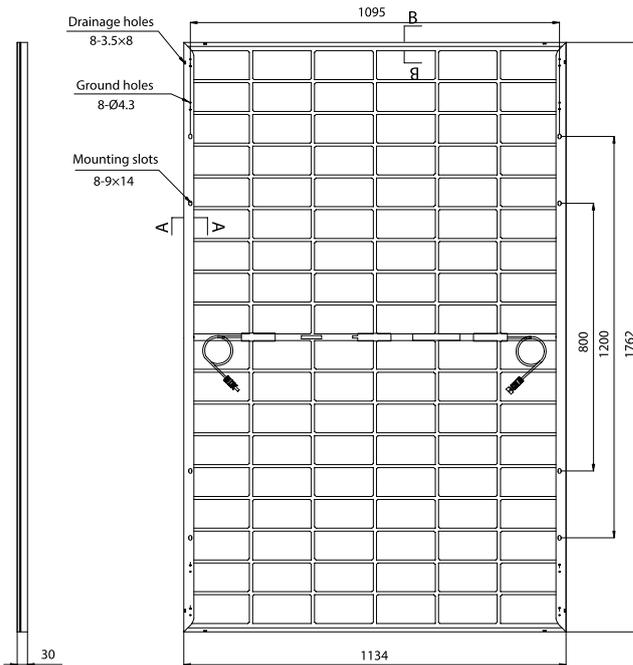
35-year product warranty.

35-year linear power output warranty.

Always assured of a good yield thanks to the long product warranty of up to 35 years. After 35 years, we guarantee an output of 85.4%.

Denim All Black Glass Glass Bifacial 455Wp

TECHNICAL DRAWING



ELECTRICAL CHARACTERISTICS

		STC ¹	NOCT ²
Maximum Power (Pmax)	(W)	455	342.2
MPP Voltage (Vmpp)	(V)	33.14	30.86
MPP Current (Impp)	(A)	13.73	11.09
Open Circuit Voltage (Voc)	(V)	39.28	37.32
Short Circuit Current (Isc)	(A)	14.63	11.81
Module Efficiency	(%)	22.77	
Power Tolerance	(W)	0 / +3	
Operating Temperature	(°C)	-40 to +85	
Maximum System Voltage	(V)	DC 1500	
Maximum Series Fuse Rating	(A)	30	
Product reference		Denim U N3 455 BBG 108H	

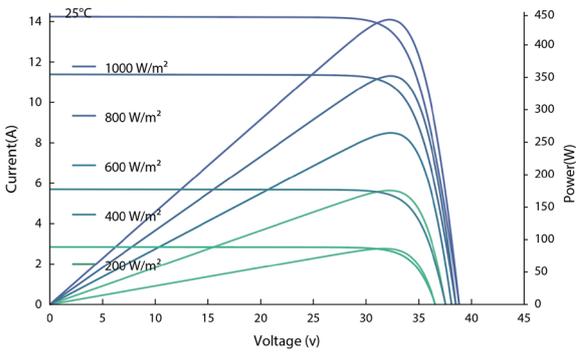
¹ STC (Standard Test Conditions): Irradiance 1000W/m², Cell temperature 25°C, Air mass 1.5

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

REAR SIDE POWER GAIN - REFER: BIFACIALITY FACTOR 80 +- 10%

5%	Maximum Power (Pmax)	478
	Module Efficiency STC (%)	23.91%
15%	Maximum Power (Pmax)	523
	Module Efficiency STC (%)	26.19%
25%	Maximum Power (Pmax)	569
	Module Efficiency STC (%)	28.46%

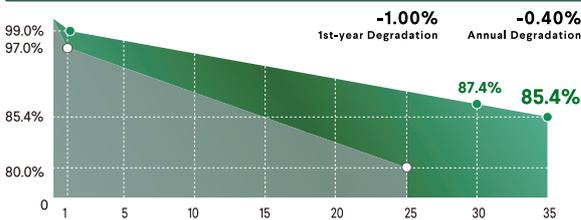
DENIM IV CURVES



MECHANICAL PROPERTIES

Cell type	N Type mono
Number of cells	108 cells (6 x 9)
Dimensions	1762 x 1134 x 30 mm
Weight	24.5 kg
Frame	Black Anodized aluminium
Front Glass	2.0mm Heat strengthened glass
Back Glass	2.0mm Heat strengthened glass
Junction Box	IP68, 3 diodes
Cable cross section/length	4 mm ² (IEC) - 1100 mm
Connector type	Stäubli - MC4-EVO2
Fire rating	Class A according to UL790
Snow load	Up to 5400 Pa
Wind load	Up to 2400 Pa
Hail test	Hailstones: Ø 25 mm, speed: 23 m/s

SUPERIOR WARRANTY



35
35-year
Product warranty

35
35-year
Linear Power Output

TEMPERATURE RATINGS & BIFACIALITY

NOCT	45±2 °C
Temperature Coefficient of Pmax	-0.29 %/°C
Temperature Coefficient of Voc	-0.23 %/°C
Temperature Coefficient of Isc	0.04 %/°C
Bifaciality	80±10%

NUMBER OF PACKAGES

Quantity per pallet	36 pcs
Quantity per container	26 pallets / 936 pcs
Pallet dimensions	1800*1136*1265 mm
Pallet weight	791 kg
Max stackable pallets	2 pallets