

AXIblackbiperfect GL 440 - 450 Wp

High performance bifacial solar module
108 halfcell, glass/glass, N-Type TOPCon



German-Australian-Engineering

The advantages:



30 years Manufacturer's warranty and Performance guarantee



Up to 30 % more power output by Bifacial-Technology



More performance through innovative N-Type TOPCon-Technology



PID reduced through glass/glass-Technology



Increased safety through improved fire protection



Guaranteed positive power tolerance from 0-5 Wp by individual measurement

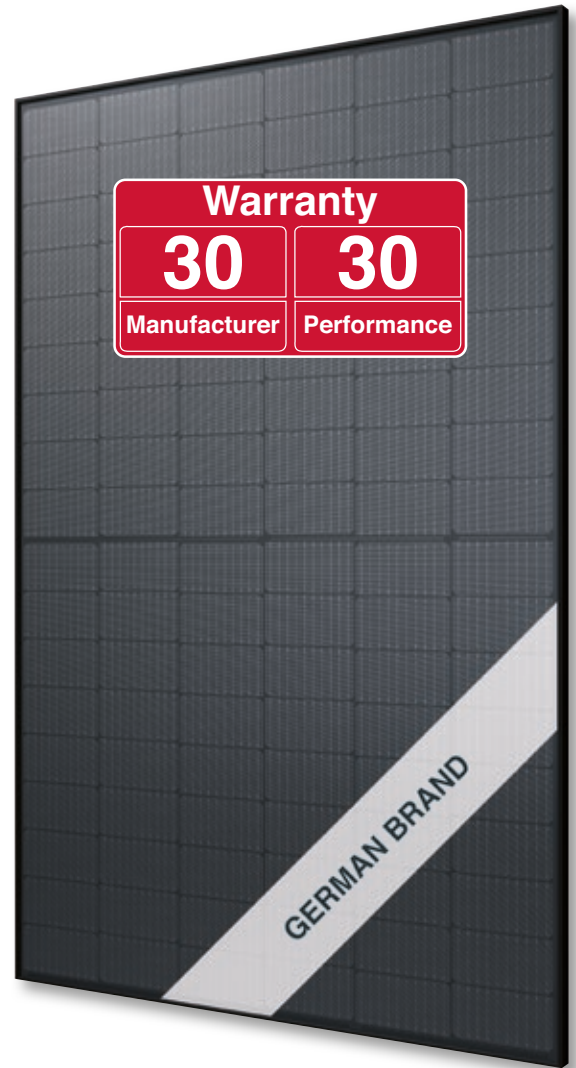
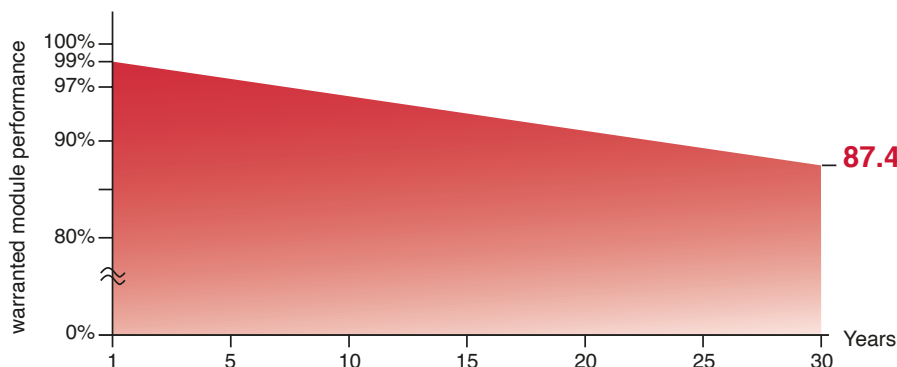


Fig. similar 108TGBLAUS250324A

Exclusive linear AXITEC high performance guarantee!



87.4 % AXITEC Warranty Added Value

TOPCon N-Type Module
PERC-Module



Lisence holder:
AXITEC Energy GmbH & Co. KG
Otto-Lilienthal-Str. 5
71034 Böblingen, Germany

Tested to IEC 61730:2023; IEC 61215:2021

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Electrical data

at standard conditions (STC): irradiance 1000 W/m², spectrum AM 1.5 at a cell temperature of 25°C

Type	AC-440TGBL/108BBA	AC-445TGBL/108BBA	AC-450TGBL/108BBA		
Nominal output	440 Wp	445 Wp	450 Wp		
Nominal voltage U _{mp}	32.74 V	32.99 V	33.23 V		
Nominal current I _{mp}	13.44 A	13.49 A	13.54 A		
Short circuit current I _{sc}	14.13 A	14.19 A	14.25 A		
Open circuit voltage U _{oc}	39.42 V	39.70 V	39.98 V		
Module conversion efficiency	22.02 %	22.27 %	22.52 %		

at BNPI test conditions: irradiance frontside 1000 W/m², backside 135 W/m², with spectrum AM 1,5 at a cell temperature of 25°C

Nominal output P _{mp}	485 Wp	491 Wp	496 Wp		
Short circuit current I _{sc}	15.58 A	15.64 A	15.71 A		
Open circuit voltage U _{oc}	39.42 V	39.70 V	39.98 V		

Bifacial coefficients: ϕ_{Uoc} 0,98±5%; ϕ_{Isc} 0,80±10%; ϕ_{Pmp} 0,80±10%

with 5 % bifacial gain:

Nominal output P _{mp}	462 Wp	467 Wp	472 Wp		
Nominal voltage U _{mp}	32,74 V	32.99 V	33.23 V		
Nominal current I _{mp}	14.11 A	14.16 A	14.22 A		
Short circuit current I _{sc}	14.84 A	14.90 A	14.96 A		
Open circuit voltage U _{oc}	39.42 V	39.70 V	39.98 V		

*The bifacial gain is the additional gain from the back side of PV. It depends on the mounting method, orientation, tilt angle of the PV module and the albedo of the ground.

Design

Frontside	2.0 mm low-reflection white glass
Backside	2.0 mm glass, cell spaces black
Cells	108 N-Type TOPCon bifacial high efficiency cells
Frame	30 mm black aluminium frame

Mechanical data

L x W x H	1762 x 1134 x 30 mm
Weight	25 kg with frame

Mechanical load

Design load (pressure/suction)	3600 Pa / 1600 Pa
Test load (pressure/suction)	5400 Pa / 2400 Pa

Power connection

Socket	Protection Class IP68, 3 bypass diodes
Wire	approx. 1.2 m, 4 mm ²
Plug-in system	IP68, PV-KST4-EVO2A/xy,PV-KBT4-EVO2A/xy

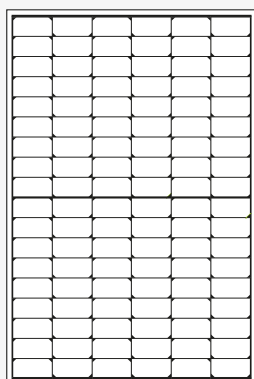
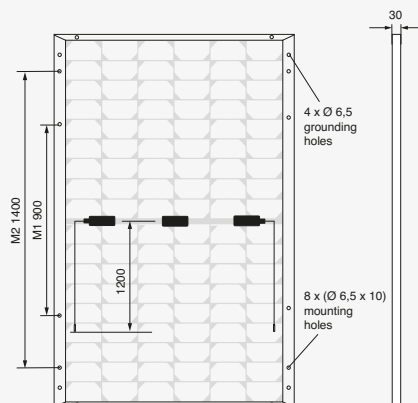


Fig. principle sketch



All dimensions in mm

Limit values

System voltage	1500 VDC
NOCT (nominal operating cell temperature)*	45°C +/-2°C
Max Series Fuse Current	30.0 A

Permissible operating temp.	-40°C to 85°C / -40°F to 185°F
Fire class / Protection class	C (UL790) / II

(No external voltages greater than U_{oc} may be applied to the module)

* NOCT, irradiance 800 W/m²; AM 1.5; wind speed 1 m/s; Temperature 20°C

Temperature coefficients

Voltage U _{oc}	-0.26 %/°C
Current I _{sc}	0.046 %/°C
Output P _{mp}	-0.31 %/°C

Low-light performance without Bifacial-effect

(Example for AC-450TGBL/108BBA)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.77 A	31.99 V
400 W/m ²	5.58 A	32.36 V
600 W/m ²	8.34 A	32.61 V
800 W/m ²	11.03 A	32.89 V
1000 W/m ²	13.54 A	33.23 V

Packaging

Module pieces per pallet	36
Module pieces per HC-container	936

country of origin:
made in People's Republic of China

