

AXIbiperfect GL WB 440 - 450 Wp

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



German-Australian-Engineering

The advantages:







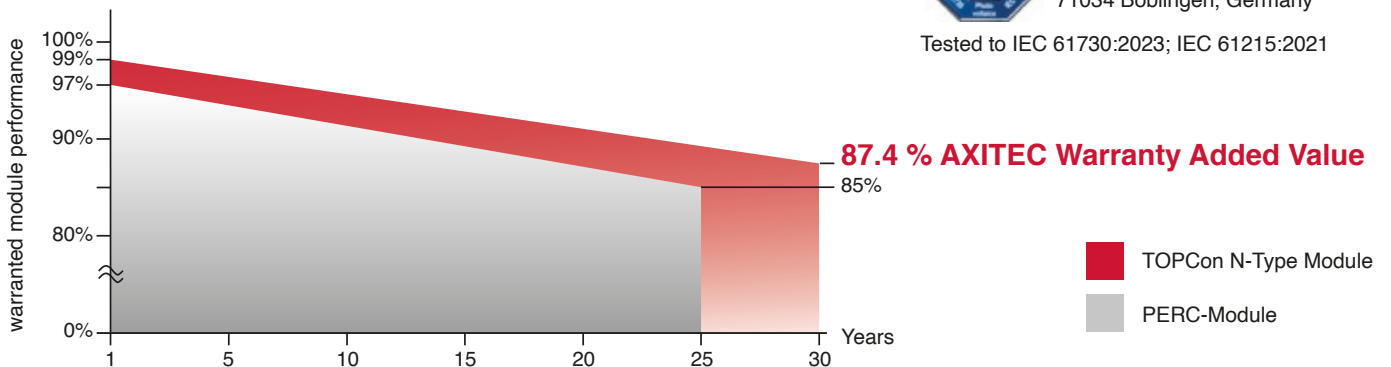
-  30 years Manufacturer's warranty and Performance guarantee
-  Up to 30 % more power output by Bifacial-Technology
-  More performance through innovative N-Type TOPCon-Technology
-  PID reduced through glass/glass-Technology
-  Increased safety through improved fire protection
-  Guaranteed positive power tolerance from 0-5 Wp by individual measurement



Fig. similar 144TGBAUS240909A

Exclusive linear AXITEC high performance guarantee!



Lisence holder:
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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/108WBA	AC-445TGBL/108WBA	AC-450TGBL/108WBA
Nominal output	440 Wp	445 Wp	450 Wp
Nominal voltage U _{mpp}	32.74 V	32.99 V	33.23 V
Nominal current I _{mpp}	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 voltag 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 _{mpp}	485 Wp	491 Wp	496 Wp
Short circuit current I _{sc}	15.58 A	15.64 A	15.71 A
Open circuit voltag U _{oc}	39.42 V	39.70 V	39.98 V

Bifacial coefficients: φU_{oc} 0,98±5%; φI_{sc} 0,80±10%; φP_{mpp} 0,80±10%

with 5 % bifacial gain:

Nominal output P _{mpp}	462 Wp	467 Wp	472 Wp
Nominal voltage U _{mpp}	32.74 V	32.99 V	33.23 V
Nominal current I _{mpp}	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 voltag 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	1.6 mm low-reflection white glass
Backside	1.6 mm glass, cell spaces white
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	21.6 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

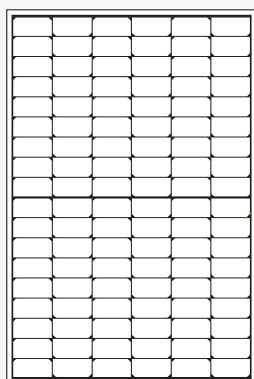
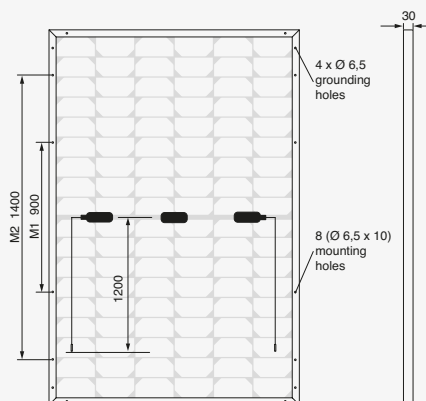


Fig. principle sketch



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 / -40F to 185F
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 _{mpp}	-0.31 %/°C

Low-light performance without Bifacial-effect

(Example for AC-450TGBL/108WBA)

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

