

AXIblackbiperfect GR 440 - 460 Wp

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

The advantages:

- 30 Years** 30 years Manufacturer's warranty and Performance guarantee
- +30%** Up to 30 % more power output by Bifacial-Technology
- TOP** More performance through innovative N-Type TOPCon-Technology
- PID less** PID reduced through glass/glass-Technology
- Safe** Increased safety through improved fire protection
- + Wp** Positive power sorting from 0-5 Wp

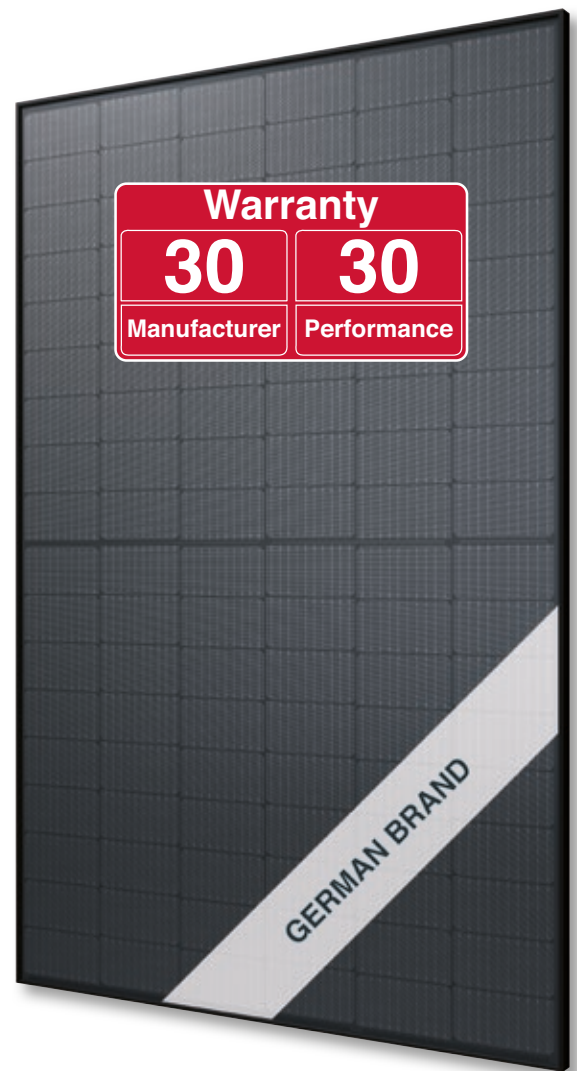
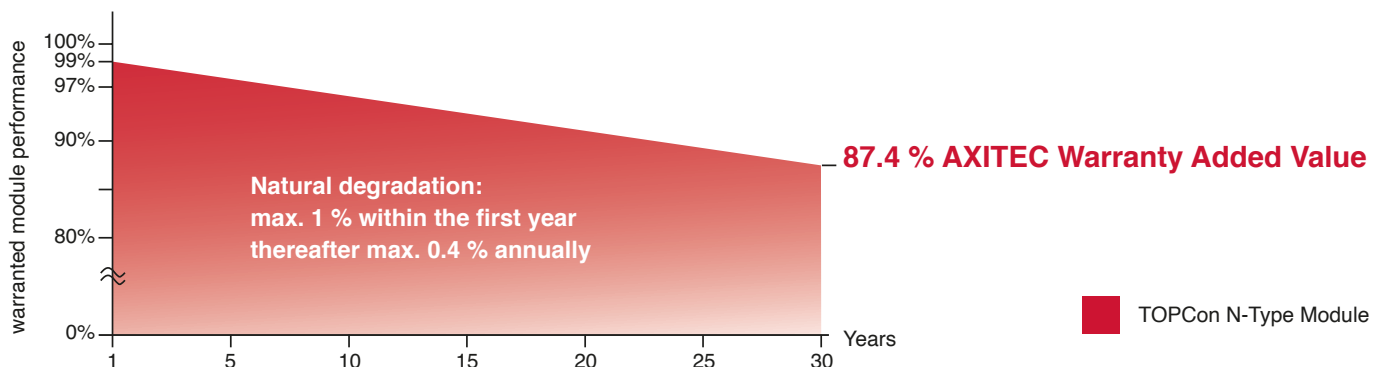


Fig. similar 108TGBEN2411070A

Exclusive linear AXITEC high performance guarantee!



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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-440TGB/108BB	AC-445TGB/108BB	AC-450TGB/108BB	AC-455TGB/108BB	AC-460TGB/108BB
Nominal output	440 Wp	445 Wp	450 Wp	455 Wp	460 Wp
Nominal voltage U_{mpp}	32.24 V	32.49 V	32.73 V	32.98 V	33.22 V
Nominal current I_{mpp}	13.65 A	13.70 A	13.75 A	13.80 A	13.85 A
Short circuit current I_{sc}	14.34 A	14.4 A	14.46 A	14.51 A	14.57 A
Open circuit voltage U_{oc}	39.83 V	39.12 V	39.41 V	39.68 V	39.96 V
Module conversion efficiency	21.56 %	21.80 %	22.05 %	22.29 %	22.54 %

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	502 Wp	507 Wp
Short circuit current I_{sc}	15.81 A	15.88 A	15.94 A	16.00 A	16.07 A
Open circuit voltage U_{oc}	38.83 V	39.12 V	39.41 V	39.68 V	39.96 V

Bifacial coefficients: ϕU_{oc} 0.98±5%; ϕI_{sc} 0.80±10%; ϕP_{mpp} 0.80±10%

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	1800 x 1134 x 30 mm
Weight	25.3 kg with frame

Mechanical load

Design load (pressure/suction) 3600 Pa / 1600 Pa *

Test load (pressure/suction) 5400 Pa / 2400 Pa *

* depending on the type of installation according to the installation instructions

Power connection

Socket	Protection Class IP68, 3 bypass diodes
Wire	approx. 1.2 m, 4 mm²
Plug-in system	IP68, MC4-EVO 2, MC4-EVO 2A, JM608

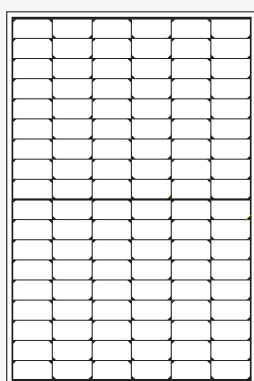
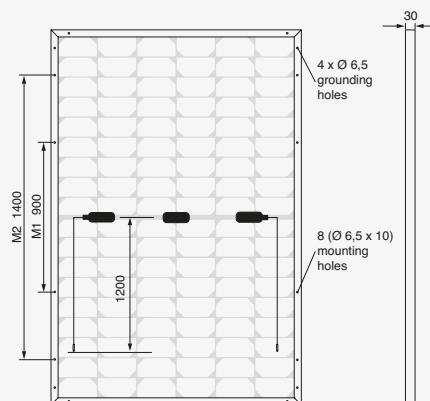


Fig. principle sketch



All dimensions in mm

Limit values

System voltage	1500 VDC
NOCT (nominal operating cell temperature)*	45°C +/-2K
Reverse current feed IR	30.0 A

Permissible operating temp. -40°C to 85°C / -40°F to 185°F

Fire class / Protection class C (UL790) / II

Hail resistance HW3 (Ø 30 mm, 23.6 m/s)

(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 %/K
Current I_{sc}	0.046 %/K
Output P_{mpp}	-0.31 %/K

Low-light performance without Bifacial-effect

(Example for AC-460TGB/108BB)

I-U characteristic curve	Current I_{pp}	Voltage U_{pp}
200 W/m²	2.83 A	31.97 V
400 W/m²	5.71 A	31.86 V
600 W/m²	8.53 A	32.34 V
800 W/m²	11.28 A	32.87 V
1000 W/m²	13.85 A	33.22 V

Packaging

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

