

## AXIblackbiperfect GL 440 - 455 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

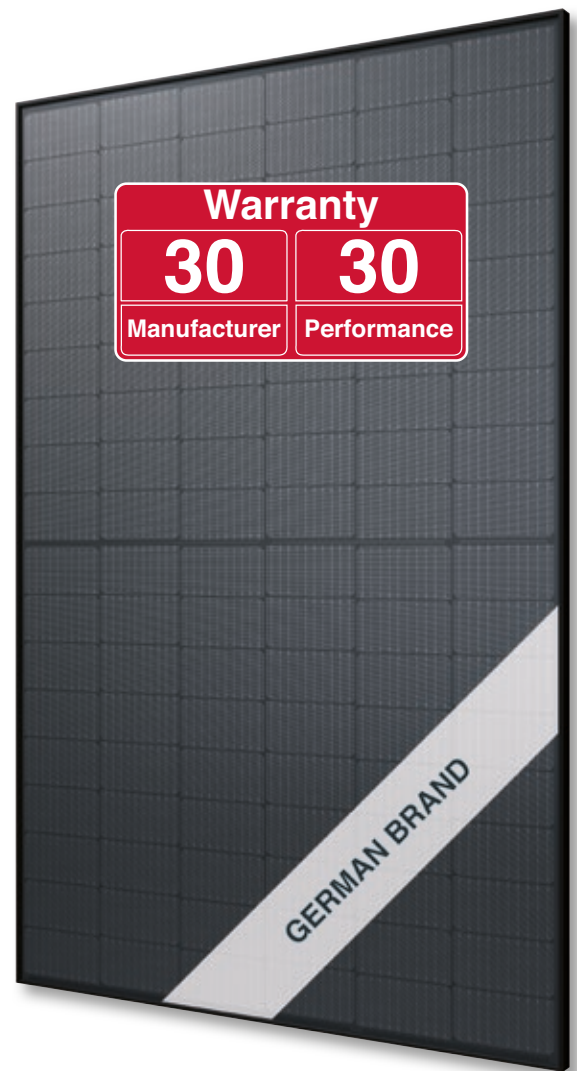
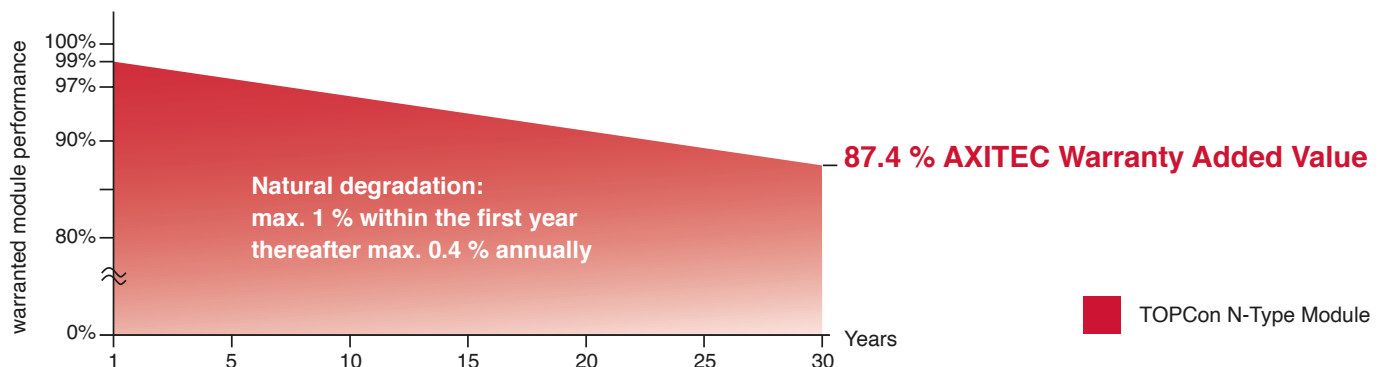


Fig. similar 108TGBLEN241028A

### Exclusive linear AXITEC high performance guarantee!



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### Electrical data

at standard conditions (STC): irradiance 1000 W/m<sup>2</sup>, spectrum AM 1.5 at a cell temperature of 25°C

Type	AC-440TGBL/108BB	AC-445TGBL/108BB	AC-450TGBL/108BB	AC-455TGBL/108BB
Nominal output	440 Wp	445 Wp	450 Wp	455 Wp
Nominal voltage U <sub>mpp</sub>	32.74 V	32.99 V	33.24 V	33.41 V
Nominal current I <sub>mpp</sub>	13.44 A	13.49 A	13.54 A	13.62 A
Short circuit current I <sub>sc</sub>	14.13 A	14.19 A	14.25 A	14.31 A
Open circuit voltage U <sub>oc</sub>	39.42 V	39.70 V	39.98 V	40.28 V
Module conversion efficiency	22.02 %	22.27 %	22.52 %	22.77 %

at BNPI test conditions: irradiance frontside 1000 W/m<sup>2</sup>, backside 135 W/m<sup>2</sup>, with spectrum AM 1.5 at a cell temperature of 25°C

Nominal output P <sub>mpp</sub>	485 Wp	491 Wp	496 Wp	502 Wp
Short circuit current I <sub>sc</sub>	15.58 A	15.64 A	15.71 A	15.77 A
Open circuit voltage U <sub>oc</sub>	39.42 V	39.70 V	39.98 V	40.28 V

Bifacial coefficients:  $\phi U_{oc}$  0.98±5%;  $\phi I_{sc}$  0.80±10%;  $\phi P_{mpp}$  0.80±10%

### Design

Frontside	1.6 mm low-reflection white glass
Backside	1.6 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	22,0 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 mm <sup>2</sup>
Plug-in system	IP68, MC4-EVO 2, MC4-EVO 2A, JM608

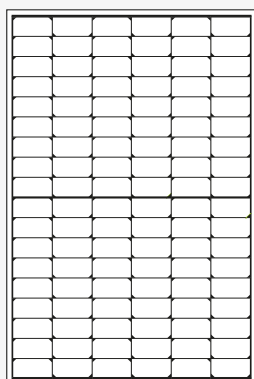
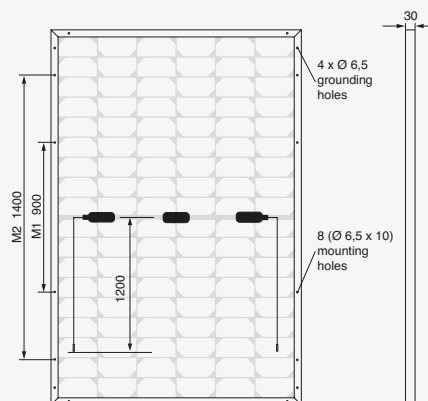


Fig. principle sketch



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 temperature	-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<sub>oc</sub> may be applied to the module)

\* NOCT, irradiance 800 W/m<sup>2</sup>; AM 1.5; wind speed 1 m/s; Temperature 20°C

### Temperature coefficients

Voltage U <sub>oc</sub>	-0.26 %/K
Current I <sub>sc</sub>	0.046 %/K
Output P <sub>mpp</sub>	-0.31 %/K

### Low-light performance without Bifacial-effect

(Example for 455TGBL/108BB)

I-U characteristic curve	Current I <sub>pp</sub>	Voltage U <sub>pp</sub>
200 W/m <sup>2</sup>	2.78 A	32.15 V
400 W/m <sup>2</sup>	5.62 A	32.52 V
600 W/m <sup>2</sup>	8.39 A	32.78 V
800 W/m <sup>2</sup>	11.09 A	33.06 V
1000 W/m <sup>2</sup>	13.62 A	33.41 V

### Packaging

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

