

AXIblackbiperfect GR 440 - 460 Wp

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

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
-  Positive power sorting from 0-5 Wp

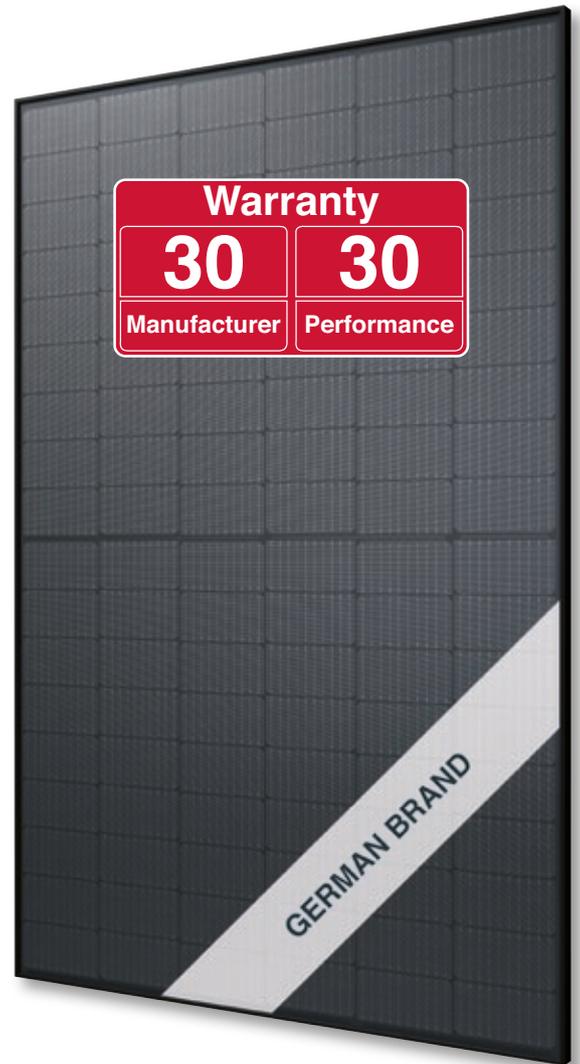
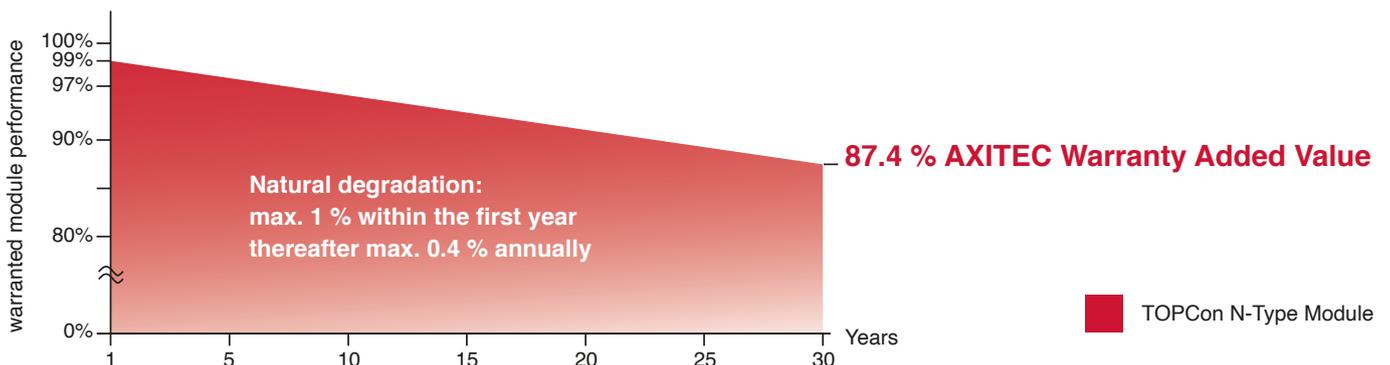


Fig. similar 108TGBEN2411070A

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 voltag 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 voltag 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 mm ² |
| Plug-in system | IP68, MC4-EVO 2, MC4-EVO 2A, JM608 |

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 / -40F to 185F |
| 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/m ² | 2.83 A | 31.97 V |
| 400 W/m ² | 5.71 A | 31.86 V |
| 600 W/m ² | 8.53 A | 32.34 V |
| 800 W/m ² | 11.28 A | 32.87 V |
| 1000 W/m ² | 13.85 A | 33.22 V |

Packaging

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

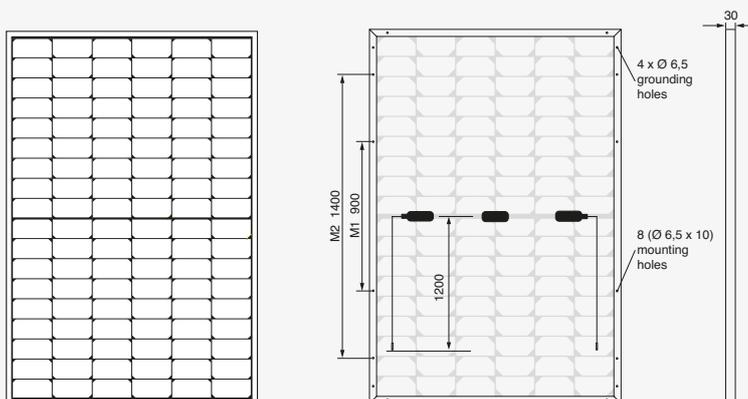


Fig. principle sketch

All dimensions in mm

