

AXIworldblackbiperfect GL 440 - 455 Wp

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

The advantages:







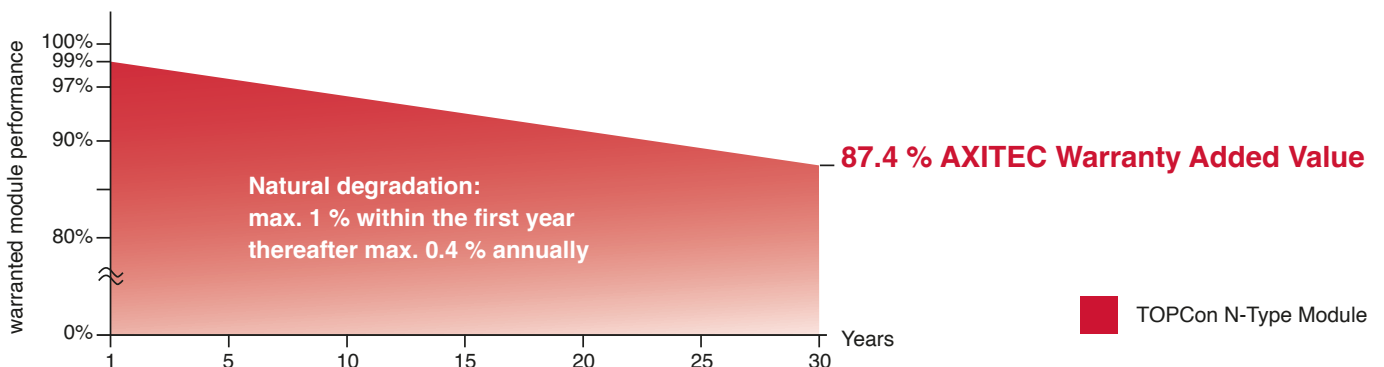
-  30 years Manufacturer's warranty and Performance guarantee
-  Up to 30 % more power output by Bifacial-Technology
-  More performance through innovative N-Type TOPCon-Technology
-  PID reduced through glass/glass-Technology
-  Increased safety through improved fire protection
-  Positive power sorting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



Fig. similar 108TGBLEN280224A-45/1

Exclusive linear AXITEC high performance guarantee!



AXIworldblackbiperfect GL 440-455 Wp

Electrical data

at standard conditions (STC): irradiance 1000 W/m². 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 _{mpp}	32.74 V	32.99 V	33.24 V	33.41 V
Nominal current I _{mpp}	13.44 A	13.49 A	13.54 A	13.62 A
Short circuit current I _{sc}	14.13 A	14.19 A	14.25 A	14.31 A
Open circuit voltag U _{oc}	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/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
Short circuit current I _{sc}	15.58 A	15.64 A	15.71 A	15.77 A
Open circuit voltag U _{oc}	39.42 V	39.70 V	39.98 V	40.28 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	1762 x 1134 x 30 mm
Weight	25.0 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. 1.1 m, 4 mm ²
Plug-in system	IP68, MC4-EVO 2A

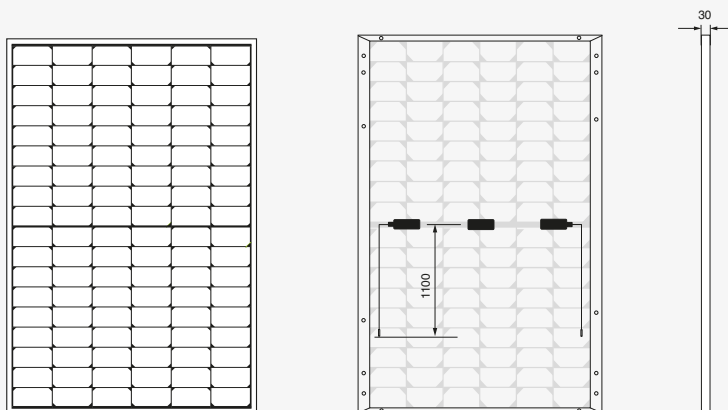


Fig. principle sketch

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 / -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 455TGBL/108BB)

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

