

# BAUER

SOLAR 

BAUER SOLARTECHNIK

## GLASS-GLASS BLACK

BS-96G12HBB-GG 460 - 470 W



GENERATION N-TYPE G12



 engineered & designed in  
**GERMANY**



## BAUER GUARANTEE +

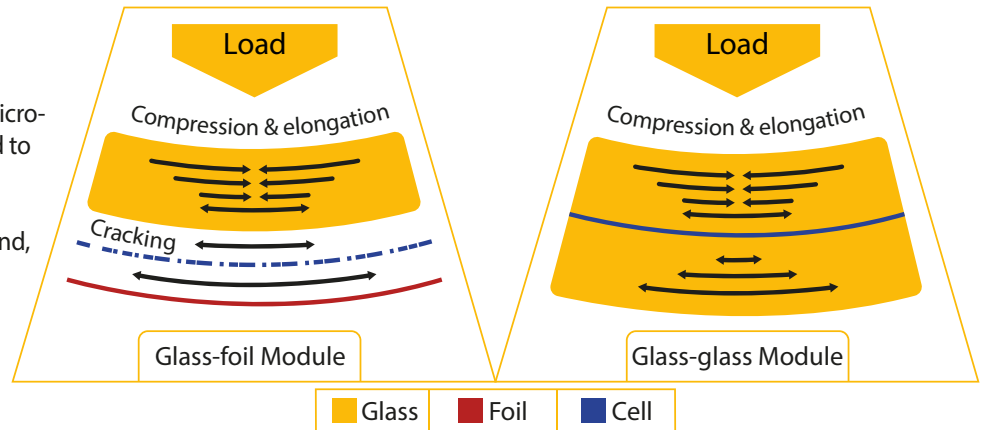
### COMPREHENSIVE PROTECTION FOR SYSTEM OPERATORS

Our extended guarantee covers the module guarantee and a fixed-sum compensation for any replacement of a defective module (Guarantee conditions as of 2023/12/01).

#### AVOID MICROCRACKS

In glass-foil modules, stress causes microcracks to form in cells, which can lead to performance losses in the long term.

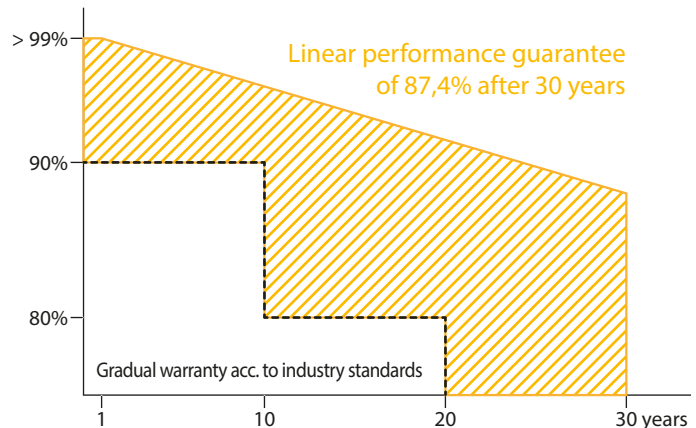
Glass-glass modules, on the other hand, distribute pressure and tensile forces more evenly, significantly reducing the risk of microcracks.



#### LINEAR PERFORMANCE GUARANTEE

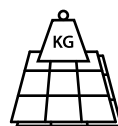
BAUER guarantees a minimum performance value of 87,4% after 30 years for glass-glass solar modules.

The guaranteed value of BAUER glass-glass solar modules as illustrated in the shown graphic compared to conventional glass-foil modules according to industry standards:



#### FIRE CLASS A

Maximum fire protection through double glazing according to the highest security requirements



#### STABILITY & DURABILITY

2 x 2 mm tempered anti-reflective solar glass: dirt-repellent, scratch-resistant, durable and shock-proven



#### BIFACIAL N-TYPE TOPCON HALF-CELLS

Up to 30% increase in yield through bifacial cells active on both sides and a transparent backside



#### GERMAN GUARANTOR

It is guaranteed that a German company takes over any claim settlements, if necessary.



#### PERFORMANCE GUARANTEE

30 year warranty and a linear performance guarantee over a period of 30 years



#### REINSURANCE COVERAGE

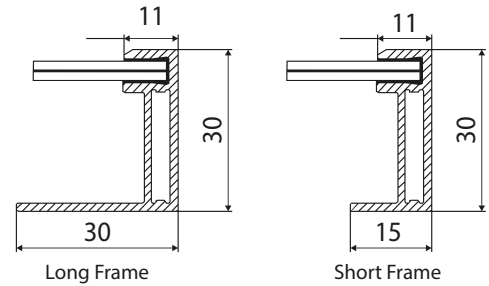
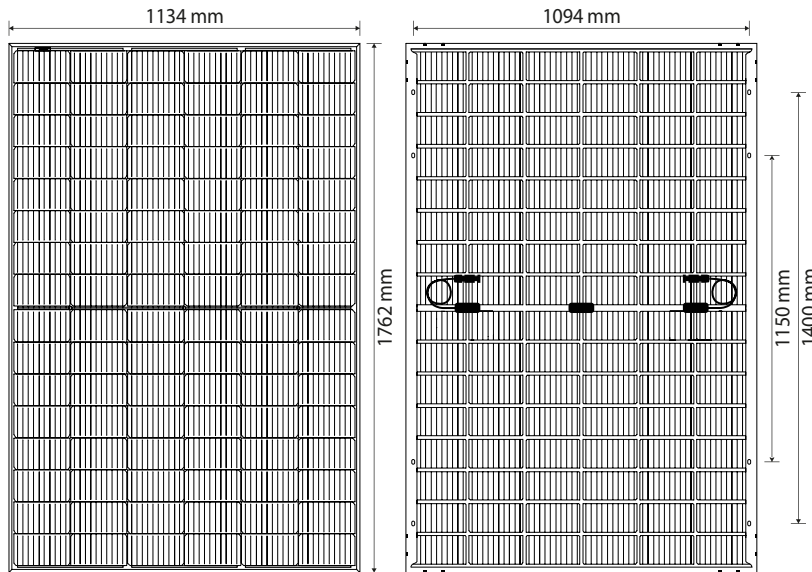
BAUER is reinsured for 30 years of the product's performance guarantee

DISTRIBUTION

BAUER SOLARTECHNIK  
**GLASS-GLASS BLACK**  
 BS-96G12HBB-GG 460 - 470 W



Our company has an excellent solvency.  
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**PHYSICAL SPECIFICATIONS**

Module dimensions	1762 x 1134 x 30 mm
Weight	24,0 kg
Frame	Anodized aluminium alloy (black)
Frontside	Premium Protect anti-reflection glass, 2 mm
Embedding material	EVA
Backside	Black coated anti-reflection glass, 2 mm
Solar cells	96 monocrystalline N-type bifacial half-cells
Bifaciality	80 % ± 5 %
Junction box(es)	IP68, 3 bypass diodes
Cable & connector	1x4 mm <sup>2</sup> , 1300 mm, Stäubli MC4/EVO2A

**WARRANTIES<sup>1</sup>**

- 30 years product warranty
- 30 years performance guarantee

**OPERATING CONDITIONS**

Operating temperature	-40 to 85°C
Static load	up to 6100 Pa
Hail test	HW3 Ø 30 mm at ~ 24 m/s

**CERTIFICATION**

IEC 61215, IEC 61730, Fire class A acc. IEC 61730-2  
 IEC 61701 (Salt mist), IEC 62716 (Ammonia)

**PACKAGING**

Modules per pallet	36
Pallets/modules per truck	26/936

**ELECTRICAL CHARACTERISTICS<sup>2</sup>**

		BS-460-96G12HBB-GG	BS-465-96G12HBB-GG	BS-470-96G12HBB-GG
Maximum power	P <sub>max</sub> (W)	460	465	470
Power output tolerance	P <sub>max</sub> (%)	0 ~ +3	0 ~ +3	0 ~ +3
Open circuit voltage	V <sub>oc</sub> (V)	36,32	36,46	36,60
Short circuit current	I <sub>sc</sub> (A)	15,83	15,88	15,93
Voltage at maximum power	V <sub>mpp</sub> (V)	30,95	31,21	31,47
Current at maximum power	I <sub>mpp</sub> (A)	14,87	14,91	14,95
Module efficiency	η <sub>m</sub> (%)	23,00	23,30	23,50
<b>Bifaciality performance increase</b>				
Weakly reflective surface e.g. grass, roof tiles	10 % P <sub>mpp</sub> (W)	506 (+46)	512 (+47)	517 (+47)
Well reflecting surface e.g. sand, light-colored gravel	20 % P <sub>mpp</sub> (W)	552 (+92)	558 (+93)	564 (+94)
Highly reflective surface e.g. ice, snow	30 % P <sub>mpp</sub> (W)	598 (+138)	605 (+140)	611 (+141)
Nominal operating cell temperature	NOCT (°C)	42 +/- 2/°C		
Temperature coefficient of Voc	T <sub>k</sub> (Voc)	-0,25 %/°C		
Temperature coefficient of Isc	T <sub>k</sub> (Isc)	+0,048 %/°C		
Temperature coefficient of Pmpp	T <sub>k</sub> (Pmpp)	-0,29 %/°C		
Maximum system voltage DC (TÜV)	(V)	1500		
Maximum series fuse rating	(A)	30		

<sup>1</sup>Nominal value is specified in the written warranty conditions. A possible light-induced degradation in performance is not taken into account. <sup>2</sup>Values under Standard Test Conditions (STC): air mass 1,5 AM, irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C. STC measuring tolerance: ±3 % (P<sub>max</sub>), ±10 % (V<sub>max</sub>, I<sub>mpp</sub>, V<sub>OC</sub>, I<sub>SC</sub>). The beneficiary under the reinsurance policy is solely BAUER Solar Engineering GmbH. Please contact us to get information on how this insurance coverage benefits you as a customer. Note: please read the safety instructions and installation manual before using this product. Subject to change.  
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**DISTRIBUTION**



With the CrefoZert certification, BAUER Solar is among the top 2% of all companies in Germany in terms of financial strength. For you as a customer, this means maximum security, reliability, and a long-term partner you can count on. The certification confirms our stable financial base and sustainable business practices – a guarantee that we will continue to be a reliable partner for you now and in the future.

## THE ENTIRE PACKAGE



- Security thanks to over 20 years of experience in the PV sector
- Growth and prospects with excellent credit rating
- Industry-leading product and performance guarantee
- Maximum yields and reliability thanks to the highest quality
- Individual and customised advice for every area of application

## THE EXPERTISE



- Industry pioneer since 1985 with over 39 years of company history
- More than 20 years of experience in the photovoltaic industry
- Owner-managed throughout two generations
- More than 4,000 MW of installed and sold module capacity
- 6000 m<sup>2</sup> of warehouse space for our international customers

## THE PROMISE



- The latest generation of solar modules with innovative technology
- Strict quality controls and product tests
- Customised solar solutions for all areas of application
- Close, trusting and reliable partnerships
- Availability and punctual deliveries

We have been supplying our international customers with premium solar modules for more than 20 years. As a pioneer in the industry, we are pursuing our path towards sustainable energy generation with conviction and the power of the sun. Today, we are still a family-run company and stand for financial solidity, sustainable growth and close partnerships.



**BAUER SOLAR – RELIABLE LIKE THE SUN**