

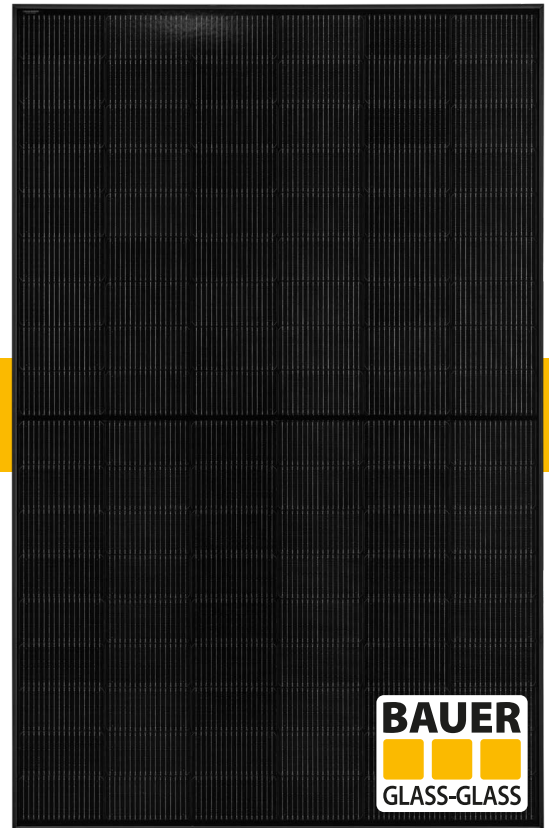


GENERATION N-TYPE M10

## BAUER SOLARTECHNIK GLASS-GLASS BLACK

BS-108M10HBB-GG 440 - 450 W

BIFACIAL GLASS-GLASS HALF-CELL MODULE - BLACK

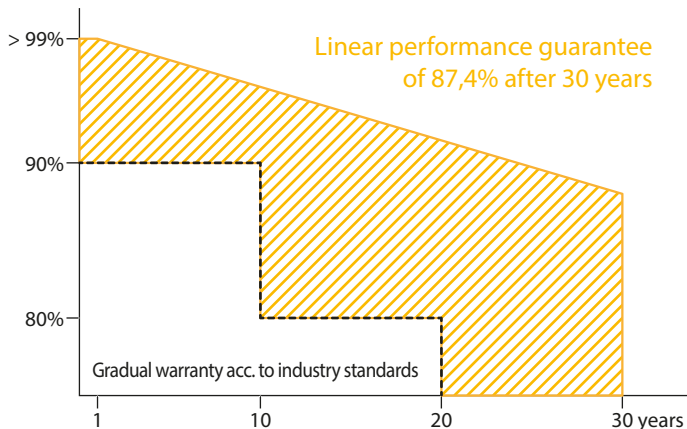


engineered & designed in  
**GERMANY**



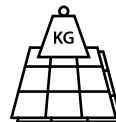
BAUER guarantees a minimum performance value of 87,4% after 30 years for the glass-glass solar modules.

A comparison of BAUER glass-glass solar modules performance guarantee 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-proved



### 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

If necessary, it is guaranteed that a German company takes over any claim settlements



### PERFORMANCE GUARANTEE

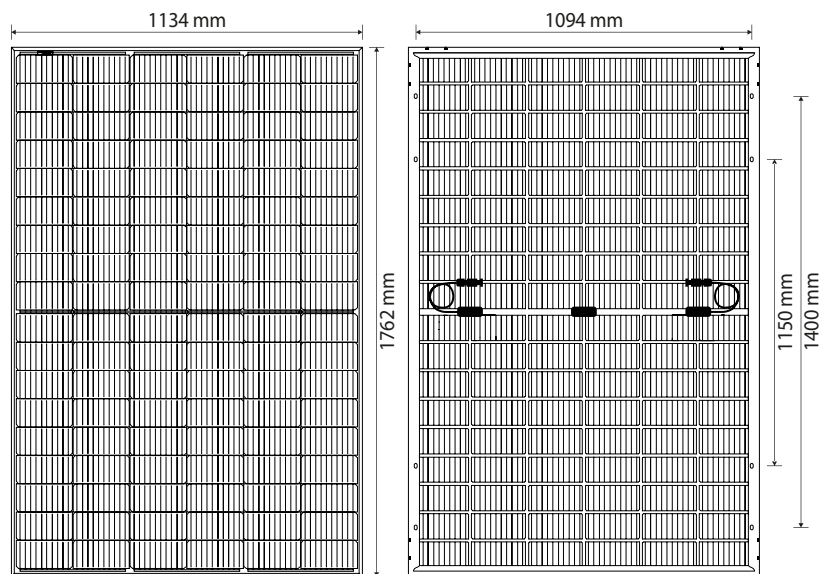
30 year warranty and a linear performance guarantee over a period of 30 years



### REINSURANCE COVERAGE

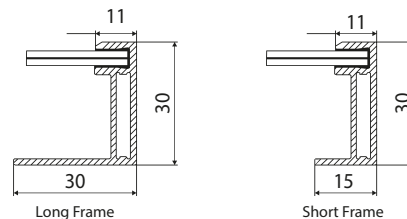
BAUER is reinsured for 30 years of the product's performance guarantee

DISTRIBUTION



## BAUER SOLARTECHNIK GLASS-GLASS BLACK

BS-108M10HBB-GG 440 - 450 W



### WARRANTIES<sup>1</sup>

30 years product warranty

30 years performance guarantee

### PHYSICAL SPECIFICATIONS

Module dimensions	1762 x 1134 x 30 mm
Weight	24,5 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	108 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

### OPERATING CONDITIONS

Operating temperature	-40 to 85°C
Static load	5400 Pa (snow/wind)
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-440-108M10HBB-GG	BS-445-108M10HBB-GG	BS-450-108M10HBB-GG
Maximum power	P <sub>max</sub> (W)	440	445	450
Power output tolerance	P <sub>max</sub> (%)	0 ~ +3	0 ~ +3	0 ~ +3
Open circuit voltage	V <sub>oc</sub> (V)	39,40	39,60	39,80
Short circuit current	I <sub>sc</sub> (A)	13,90	13,97	14,04
Voltage at maximum power	V <sub>mpp</sub> (V)	32,84	33,04	33,24
Current at maximum power	I <sub>mpp</sub> (A)	13,40	13,47	13,54
Module efficiency	η <sub>m</sub> (%)	22,00	22,30	22,50
Bifaciality performance increase*	10 % P <sub>mpp</sub> (W)	484 (+44)	490 (+45)	495 (+45)
	20 % P <sub>mpp</sub> (W)	528 (+88)	534 (+89)	540 (+90)
	30 % P <sub>mpp</sub> (W)	572 (+132)	579 (+134)	585 (+135)
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>mp</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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