



SOLAR GLASS PANELS without frame

FOR ROOFING SYSTEMS, FENCE AND BALCONY

200/300/310/360 Wp bifacial | 300 Wp black
390 Wp HC bifacial
300 Wp bifacial | 210 Wp Maxim bifacial

Bifacial cell technology

Up to 30% more yield by utilising the incidence of light on the rear side too

Extremely resistant and durable

Withstands even extreme environmental influences thanks to special glass composite system

Frameless design

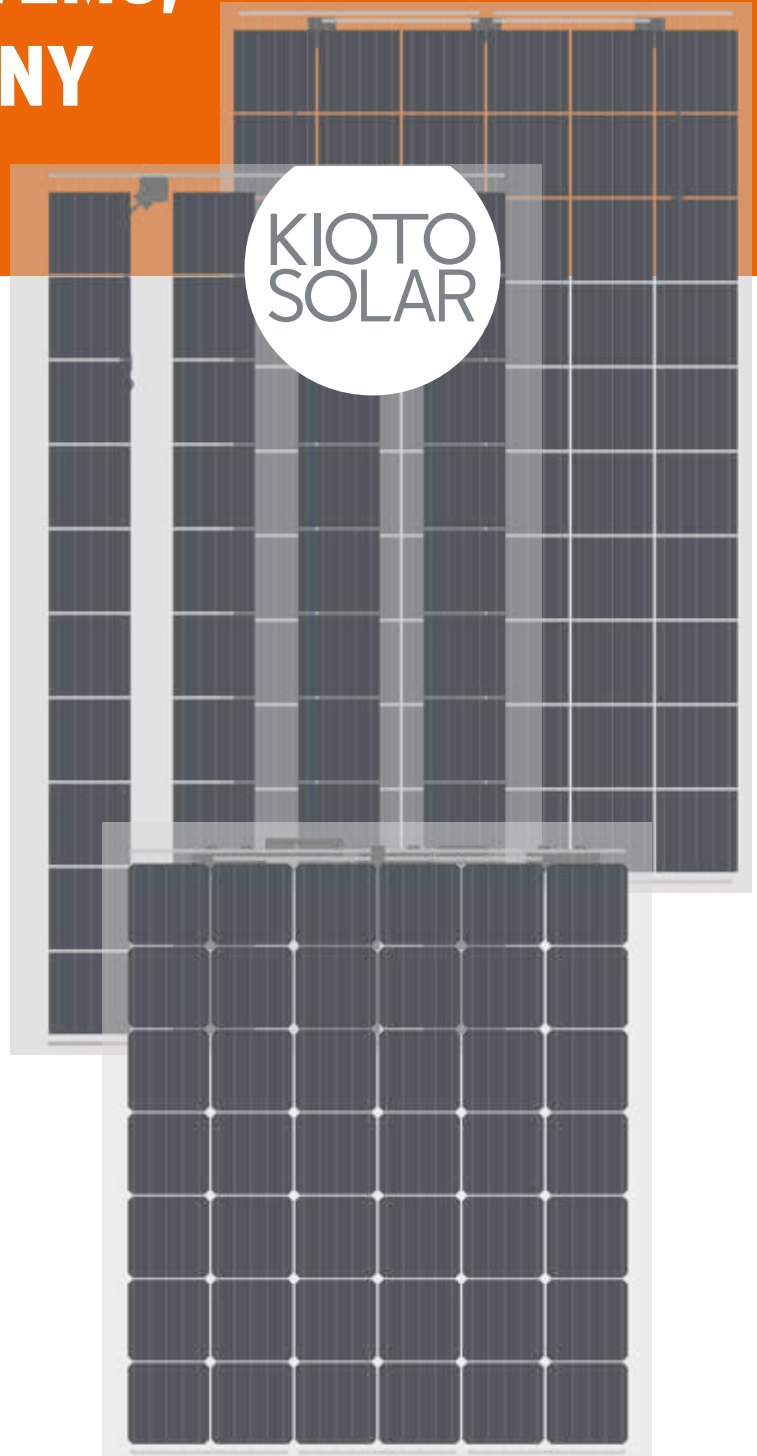
No damming edge, less dirt, snow slides off easily

Optimised glass composite system

Panel size and bearing or clamping surface are precisely coordinated to the respective application

DIBt approval by the building authorities

(for full cell modules)



VERY VERSATILE!
For use in the building
envelope, as a fence or
balcony.

SONNENGLÄSER solar glass panels for roofing systems

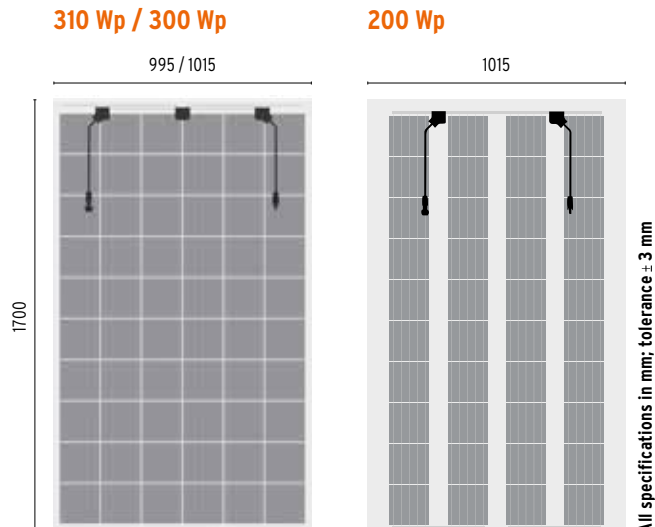
Module data (For performance data, please refer to the front of the module)	310 Wp bifacial 2 x 3 mm	300 Wp bifacial 2 x 4 mm	200 Wp bifacial 2 x 4 mm
Pmpp	310 Wp	300 Wp	200 Wp
Umpp	32.91 V	33.98 V	22.65 V
Impp	9.42 A	8.83 A	8.83 A
Uoc	39.28 V	40.56 V	27.04 V
Isc	9.85 A	9.42 A	9.42 A
Efficiency	18.33%	17.39%	11.59%
Space requirement/kWp	5.46 m ²	5.75 m ²	8.63 m ²

Electrical data	310 Wp bifacial	300 Wp bifacial	200 Wp bifacial
Cells	60 bifacial full cells (6 x 10) 157 x 157 mm (5 busbar)	60 bifacial full cells (6 x 10) 157 x 157 mm (5 busbar)	40 bifacial full cells (4 x 10) 157 x 157 mm (5 busbar)
Connection and plug system	3 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear side, top	3 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear side, top	2 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear side, top
Max. system voltage	1000 V DC		
Power tolerance	+5 W / -0 W (measurement: standard test conditions)		
Temperature coefficients	Pmpp -0.42%/K Uoc -0.32%/K Isc +0.047%/K		
Maximum return current	15 A		
Operating temperature	+85 °C to -40 °C		
Cable length	2 x 350 mm		
Bypass diodes	3 piece		
Performance guarantee	min. 97% in the first year, thereafter max. reduction by 0.7% p.a. up to 25 years		
Product guarantee	12 years		

Technical data	310 Wp bifacial	300 Wp bifacial	200 Wp bifacial
Weight	27.5 kg	38.0 kg	38.0 kg
Dimensions (HxWxD)	1700 x 995 x 7 mm (± 3 mm) lateral bearing surface: 20 mm	1700 x 1015 x 9 mm (± 3 mm) lateral bearing surface: 30 mm	1700 x 1015 x 9 mm (± 3 mm) lateral bearing surface: 86 mm
Panel thickness	2 x 3 mm	2 x 4 mm	2 x 4 mm
Light transmission	15%	15%	40%
Salt mist / ammonia resistance	provided		
Extended hail test	Qualification for HW4		
applicable standards	Conformity to IEC 61215 and IEC 61730; IP 65 DIBt Z-70.3-266		
Packaging configuration	15 modules/pallet		

DIBt approval for full-cell modules

We are one of the few companies in the world to have received the general building authority approval of the German Institute for Building Technology (DIBt) for our solar glass panels without frames (full cells). Thanks to the approval, solar glass panels from SONNENKRAFT are now considered regulated building products (analogous to classic laminated safety glass) and no longer require individual approval for each project.



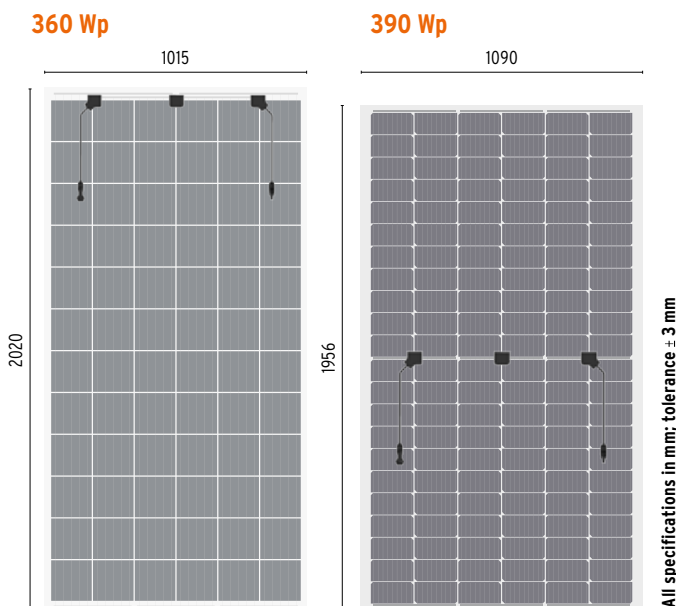
The sole responsibility for ensuring that ordered and delivered goods are suitable for the customer's purposes rests with the customer. Any technical advice provided by SONNENKRAFT ENERGY GmbH, whether verbal, in writing, by means of tests or in any other way, is given to the best of our knowledge, but is subject to the exclusion of any warranty and liability. Special technical designs or special constructions may be subject to official approval. Obtaining such consent is the responsibility of the client or building owner. Any resulting changes in execution or additional services, in particular tests and proof of calculations, shall be borne by the client; we have not carried out or checked any project-related, static pre-dimensioning or the correct use of the glass panels in terms of glass technology. Measurement tolerance ± 3%

SONNENGLÄSER solar glass panels for roofing systems

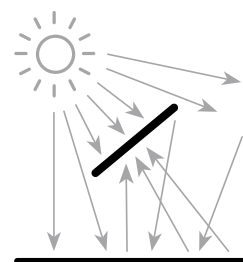
Module data (For performance data, please refer to the front of the module)	360 Wp bifacial 2 x 4 mm	360 Wp bifacial 2 x 6 mm	390 Wp bifacial 2 x 4 mm
Pmpp	360 Wp	360 Wp	390 Wp
Ump	40.77 V	40.77 V	36.57 V
Imp	8.83 A	8.83 A	10.69 A
Uoc	48.67 V	48.67 V	44.63 V
Isc	9.42 A	9.42 A	11.18 A
Efficiency	17.56%	17.56%	18.29%
Space requirement/kWp	5.70 m ²	5.70 m ²	5.47 m ²

Electrical data	360 Wp bifacial 2 x 4 mm	360 Wp bifacial 2 x 6 mm	390 Wp bifacial 2 x 4 mm
Cells	72 bifacial full cells (6 x 12) 157 x 157 mm (5 busbar)	72 bifacial full cells (6 x 12) 157 x 157 mm (5 busbar)	132 bifacial half cells (6 x 22) 166 x 38 mm (9 busbar)
Connection and plug system	3 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear side, top	3 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear side, top	3 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear, centre
Max. system voltage	1000 V DC		
Power tolerance	+5 W / -0 W (measurement: standard test conditions)		
Temperature coefficients	Pmpp -0.42%/K Uoc -0.32%/K Isc +0.047%/K		
Maximum return current	15 A		
Operating temperature	+85 °C to -40 °C		
Cable length	2 x 350 mm	2 x 350 mm	2 x 500 mm
Bypass diodes	3 piece		
Performance guarantee	min. 97% in the first year, thereafter max. reduction by 0.7% p.a. up to 25 years		
Product guarantee	12 years		

Technical data	360 Wp bifacial 2 x 4 mm	360 Wp bifacial 2 x 6 mm	390 Wp bifacial 2 x 4 mm
Weight	45.0 kg	60.0 kg	48.0 kg
Dimensions (HxWxD)	2020 x 1015 x 9 mm (± 3 mm) lateral bearing surface: 30 mm	2020 x 1015 x 13 mm (± 3 mm) lateral bearing surface: 30 mm	1956 x 1090 x 9 mm (± 3 mm) lateral bearing surface: 41 mm
Panel thickness	2 x 4 mm	2 x 6 mm	2 x 4 mm
Light transmission	15%	15%	15%
Salt mist / ammonia resistance	provided		
Extended hail test	Qualification for HW4		
applicable standards	Conformity to IEC 61215 and IEC 61730; IP 65 DIBt Z-70.3-266 (only for full-cell modules)		
Packaging configuration	15 modules/pallet	15 modules/pallet	30 modules/pallet



Bifacial cell technology
With bifacial cell technology, the light is absorbed on both the front and the back of the module. The increased luminous efficacy increases the efficiency of the module. The active rear side of the module can thus achieve an additional yield of up to 30%.



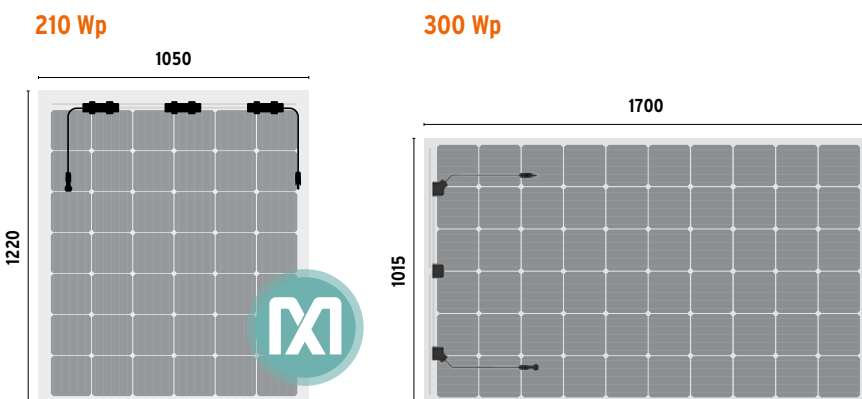
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SONNENGLÄSER solar glass panels for fence and balcony railings

Module data (For performance data, please refer to the front of the module)	300 Wp bifacial 2 x 6 mm	210 Wp Maxim bifacial 2 x 4 mm
	Balcony, transparent	Fence, transparent
Pmpp	300 Wp	210 Wp
Umpp	33.98 V	23.79 V
Impp	8.83 A	8.83 A
Uoc	40.56 V	28.40 V
Isc	9.42 A	9.42 A
Efficiency	17.39%	16.93%
Space requirement/kWp	5.75 m ²	6.10 m ²

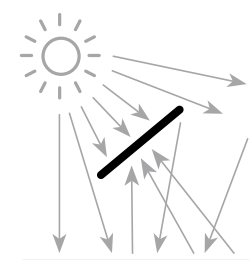
Electrical data		
Cells	60 bifacial full cells (6 x 10) 157 x 157 mm (5 busbar)	42 bifacial full cells (6 x 7) 157 x 157 mm (5 busbar)
Connection and plug system	3 pieces decentralised junction boxes with original Stäubli MC4 connectors, rear side, top	3 pcs. Decentralised Maxim junction boxes with original Stäubli MC4 connectors, rear side, top
Max. system voltage	1000 V DC	
Power tolerance	+5 W / -0 W (measurement: standard test conditions)	
Temperature coefficients	Pmpp -0.42%/K Uoc -0.32%/K Isc +0.047%/K	
Maximum return current	15 A	
Operating temperature	+85 °C to -40 °C	
Cable length	2 x 350 mm	
Bypass diodes	3 piece	
Performance guarantee	min. 97% in the first year, thereafter max. reduction by 0.7% p.a. up to 25 years	
Product guarantee	12 years	

Technical data		
Weight	51.0 kg	27.0 kg
Dimensions (HxWxD)	1700 x 1015 x 13 mm (± 3 mm) lateral clamp width: 41 mm	1220 x 1050 x 9 mm (± 3 mm) lateral clamp width: 47 mm
Panel thickness	2 x 6 mm	2 x 4 mm
Salt mist / ammonia resistance	provided	
Extended hail test	Qualification for HW4	
applicable standards	Conformity to IEC 61215 and IEC 61730; IP 65 DIBt Z-70.3-266	
Packaging configuration	15 modules/pallet	



Bifacial cell technology

With bifacial cell technology, the light is absorbed on both the front and the back of the module. The increased luminous efficacy increases the efficiency of the module. The active rear side of the module can thus achieve an additional yield of up to 30%.



All specifications in mm; tolerance ± 3 mm

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