beinus Belgian design and quality

HYPERION Glass-Glass | mono-PERC technology

410 Wp - 210 W/m²

Solid and black



Bifacial module

Bifacial modules not only generate electricity from sunlight on their front sides but also from reflected light on their rear sides, increasing overall energy yield.



Ultra black

The black cells, black frame, black spacings and matt finish make this panel a true aesthetic enhancement for your roof. Only the darkest cells are selected to use in our panels.



Glass-Glass

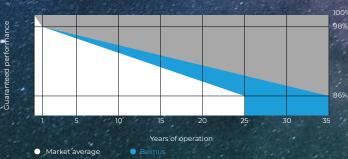
Glass at the front and at the rear for a longer longevity, lower degradation and less chance of micro-cracks. They are also more weather-, water- and fire-resistant and contain no PFAS.



Belgian quality

Designed and engineered in the heart of Europe using only parts that meet the highest European requirements for quality and safety.







UPD RESEARC

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For more information visit www.belinus.com/warranty

Mechanical characteristics

Dimensions	1722 x 1134 x 30 mm ± 1.5 mm (1.95 m²)	
Weight	23 kg	
Cell technology	mono-PERC	
N° of cells	108 (6 substrings of 18 half-cut cells)	
Cell size	182 x 182 mm	
Bifaciality factor	70% (± 5%)	
Front cover	2.0 mm tempered solar glass with DLAR coating	
Back cover	2.0 mm tempered solar glass	
Spacings transparency	Not transparent, full black	
Frame	Black anodized aluminium alloy	
Junction boxes	3 with 1 bypass diode per box, IP 68	
Output cables	4 mm² 1200 mm	
Connectors	Stäubli MC4 Evo-2	

Technical characteristics



Electrical characteristics¹

Power (P _{max}) ²		400 Wp	405 Wp	410 Wp
Module power density		205 W/m ²	207 W/m ²	210 W/m ²
Module efficiency %		20.5 %	20.7 %	21.0 %
Voltage at max. power [V _{mpn}]		31.1 V	31.4 V	31.6 V
Current at max. power [Imp]	12.9 A	12.9 A	13.0 A
Open circuit voltage [V _{oc}]		37.1 V	37.3 V	37.5 V
Short circuit current [I _{sc}]		13.8 A	13.8 A	13.9 A
Bifaciality performance – increase –	10% (P _{mpp})	428.0 Wp	433.4 Wp	438.7 Wp
	20% (P _{mpp})	456.0 Wp	461.7 Wp	467.4 Wp
	30% (P _{mpp})	484.0 Wp	490.1 Wp	496.1 Wp

¹Measured under standard test conditions (STC): 1000 W/m² irradiance, 25°C cell temperature, AM=1,5 and rear side covered for monofacial measurement. ²Power class sorting tolerance: 0 to +5W.

Specifications for system design

Maximum system voltage	1500 V
Maximum reverse current	20 A
Max. test load snow/wind	5400 Pa/-2400 Pa
Impact resistance	Ø 45 mm hail at 23 m/s
Safety class	II
Fire class	Class A according to UL790
Operating temperature	-40 to 85°C

War	ranty	Belinus	Market Average
Proc	luct	35 years	12-15 years
Perf	ormance	35 years	25 years
Serv	ice	35 years	0 years

Temperature characteristics

Nominal Operating Cell Temperature (NOCT)	45°C ± 2°C	Temperature coefficient of V_{oc}	-0.27%/C°
Temperature coefficient of P _{max}	-0.31%/C°	Temperature coefficient of I_{sc}	+0.04%/C°

Packaging information

Container	40'HC
Pieces per pallet	36
Pallets per container	26
Pieces per container	936

Certificates and tests

IEC 61215, IEC 61730



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BELINUS SOLAR BV | THOR PARK 8300, 3600 GENK, BELGIUM | TEL +32 89 27 19 99 | EMAIL INFO@BELINUS.COM | WEB WWW.BELINUS.COM