

# BLACKSTAR

## SOLID framed \_ Glass/Glass

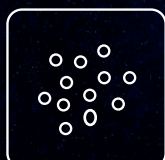
108 cell

SOLITEK \_ OUR FLAGSHIP SOLAR PANEL

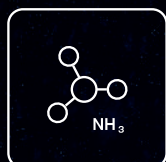
We are introducing the next generation bifacial solar panel BLACKSTAR



Fire class A



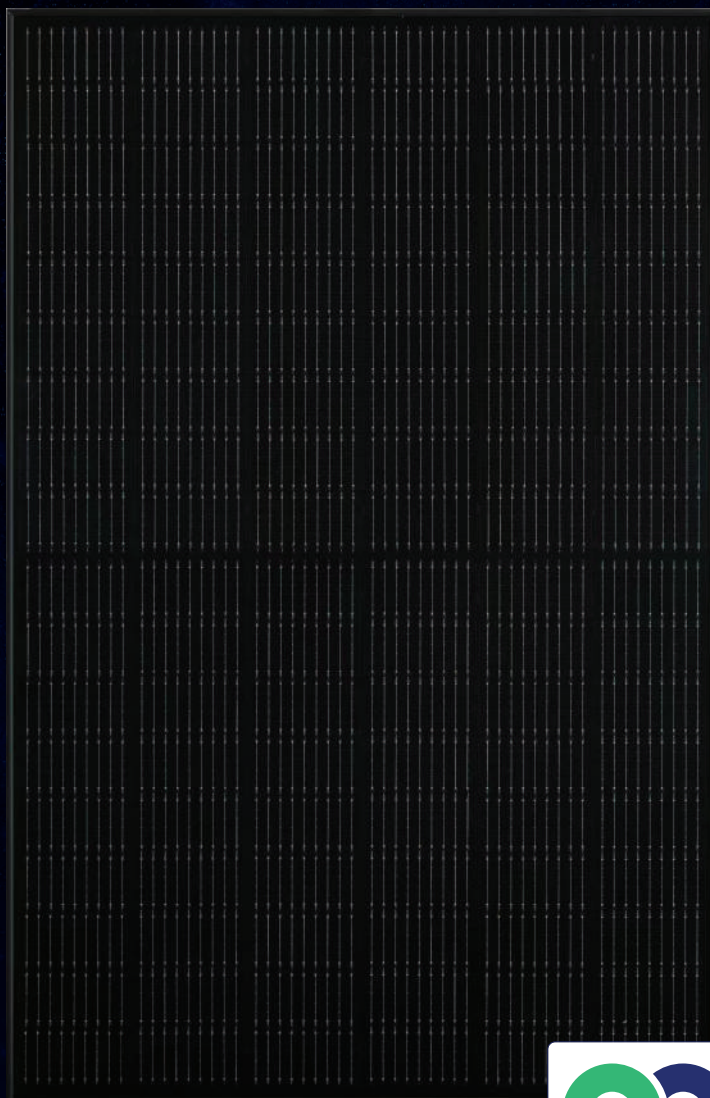
Salt mist resistance



Ammonia resistance



Dust and sand resistance



Positive sorting up to +5W

Bifacial ⚡ 420 W



**30** Year product warranty

**90%** Power guarantee

**30** Year efficiency guarantee

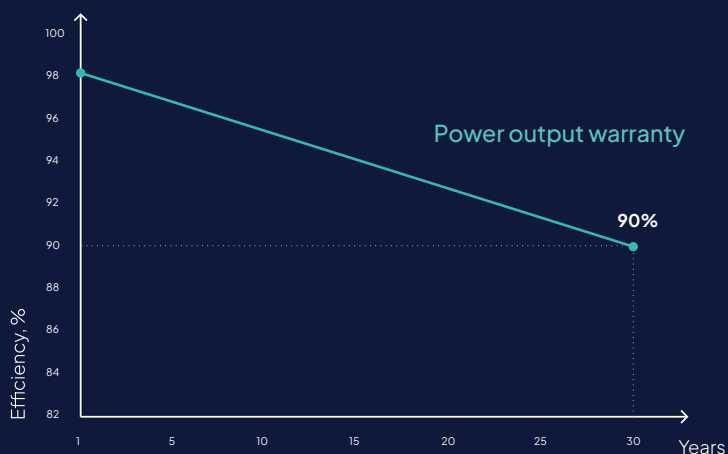
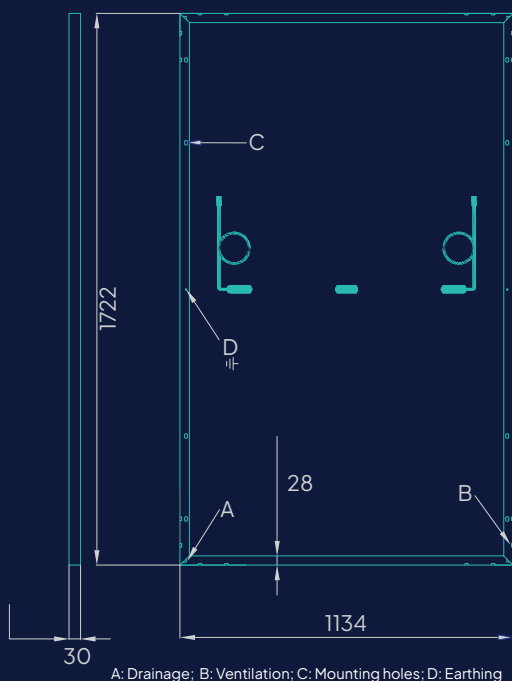
Electrical data (STC*)	
Maximum power	420
Cell technology	N type, TOPCon - bifacial
Open circuit voltage ( $V_{oc}/V$ )	37,68
Short circuit current ( $I_{sc}/A$ )	13,5
Max power voltage ( $V_{mpp}/V$ )	32,15
Max power current ( $I_{mpp}/A$ )	13,06
Module efficiency (n)	21,51%
Max system voltage (V)	1500
Max current (A)	15
Power tolerance	0/+5W

\*Under standard test conditions (STC) of irradiance of 1000W/sq.m., spectrum AM1.5 and cell temperature of 25°C. Flash testing measurement accuracy of +/-5%. All transparency values are approximate +/-3%.

Temperature ratings	
Current temperature coefficient ( $\alpha$ )	+0.036% / °C
Voltage temperature coefficient ( $\beta$ )	-0.26% / °C
Power temperature coefficient ( $\delta$ )	-0.36% / °C
Nominal operating module temperature	46 °C
Mechanical data	
Dimensions (LxWxH) (mm)	1722x1134x30 mm
Weight (kg)	25
Front / Back glass (mm)	2 mm, black
Cell Type	N type, TOPCon - bifacial
Cell Size (mm)	182x91
Busbars	10
Frame	Black anodized aluminium frame
Operating temperature (°C)	-40 ÷ +85
Design load (wind/snow) (Pa)	2400/5400**
Maximum test load (wind/snow) (Pa)	3600/8100
Junction box / IP class	Split junction box / IP68
Cable cross section size (mm <sup>2</sup> )	4
Cable length	1,2 m
Bypass diodes	3
Connector	MC4 compatible

\*\*Safety factor 1.5

## Dimensions & Mounting



## Attention

- Always check if your system is compatible with local environmental conditions (wind / snow load, temperatures) on your site to ensure safety and long-term energy production.
- Do not connect differently orientated PV panels in the same string / MPPT of the inverter (unless optimizers are used).
- Do not connect strings with an unequal amount of PV panels in one MPPT (unless optimizers are used).
- Use PV panels of same electrical parameters in one string/MPPT (unless optimizers are used).
- Always ensure that your inverter is equipped with DC disconnecter. If not it is recommended to install it externally.
- Never let different metals come in contact with each other. Use bi-metallic plates or plastic separators to eliminate galvanic corrosion.
- It is highly recommended to install SPD's in both AC and DC circuits because overvoltages void the warranty for inverters and also panels if they are harmed.
- It is highly recommended to ground PV panels mounting system and to install lightning protection in site.
- If the mounting rails are installed across the module, bifaciality effect will be lower due to cells shading.

## Tips for better power output

- Better module ventilation and shorter connection cables increase electrical energy production.
- Always observe object/mutual shading in site. Shading can drastically cut electrical energy generation output.
- Increase PV panel height from the ground so that more light can travel beneath the module and then reflect.
- The Albedo value increases significantly if the modules are installed above white, lightreflecting surfaces.



This datasheet is not legally binding. The manufacturer reserves the right to make changes to product specifications and / or product features without prior notice. The most recent versions of all documents (T&C's, datasheets, warranties and installation manuals can always be found on our website at [www.solitek.eu](http://www.solitek.eu))



PRODUCED USING 100% RENEWABLE ENERGY