

# Mono S4 Halfcut | Innovation Powerline

420 W / 425 W / 430 W

The S4 Innovation Powerline is our double-glazed classic with proven quality and top performance. Thanks to its transparent appearance, the module looks almost black and is particularly popular for pitched roofs in the residential sector, for example. Double glass module with bifacial monocrystalline N-Type/ TOPCon technology as a half cell.

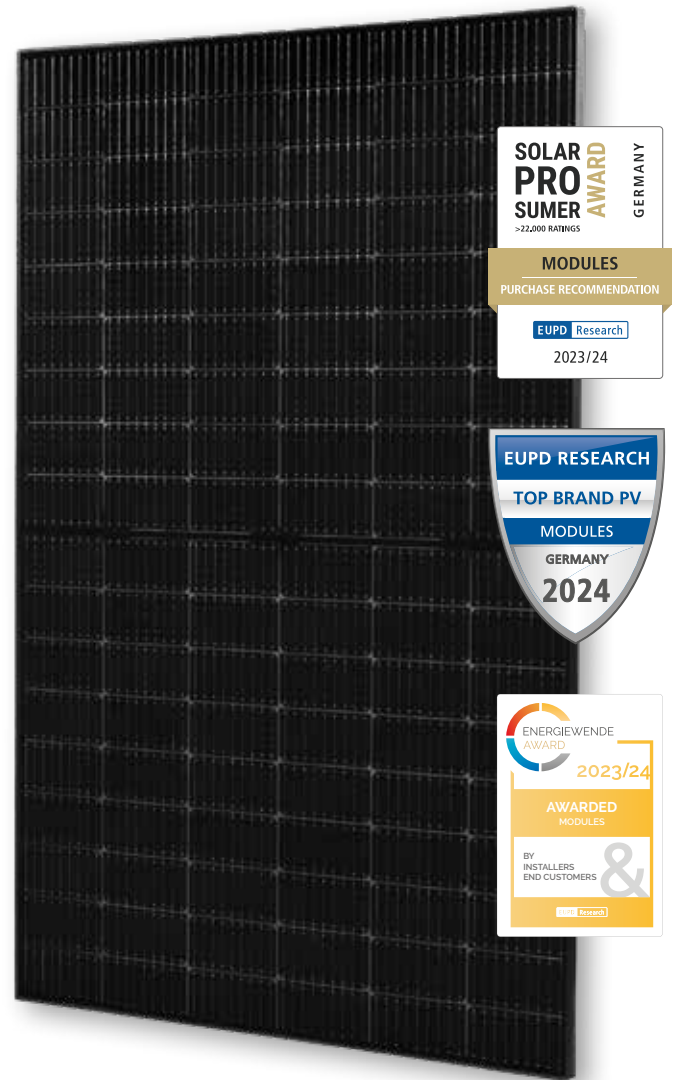
Especially suitable for:



Residential



Commercial



## German warranty

30-year guarantee on the product and 30 years on the module performance



## Hail protection class 5

Resistant to ice balls with a maximum diameter of 50 mm and a speed of 32.2 m/s



## Fire protection glass A

Best possible fire protection certification for solar modules with German TÜV certificate.



## Area utilisation factor

220 W/m<sup>2</sup> at 430 W. Better comparability through watt output per square metre



## Transparent

Transparent double glass solar module



## Bifacial cell

Transparent cell with additional energy on the back of the cell



## N-type technology

TopCon solar module with N-Type technology for even more peak performance



## Half-cell module

Two-part cell for more efficiency, more safety and more reliability



## Low-light behaviour

Outstanding performance even under low light conditions



## Glass cover

Resistant to ammonia & salt spray  
Highly transparent, self-cleaning glass

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## Electrical data under STC (Standard Test Conditions: 1000 W/m<sup>2</sup>, 25 °C, AM 1.5)

| Rated power                   | P <sub>max</sub> | 420 W   | 425 W   | 430 W   |
|-------------------------------|------------------|---------|---------|---------|
| Sorting limits of performance |                  | 0/+3 %  | 0/+3 %  | 0/+3 %  |
| Voltage                       | U <sub>MPP</sub> | 31.91 V | 32.22 V | 32.49 V |
| Open circuit voltage          | U <sub>OC</sub>  | 37.58 V | 37.75 V | 38.07 V |
| Current                       | I <sub>MPP</sub> | 13.16 A | 13.19 A | 13.24 A |
| Short-circuit current         | I <sub>SC</sub>  | 13.93 A | 13.99 A | 14.00 A |
| Efficiency                    |                  | 21.50 % | 21.80 % | 22.00 % |

## Temperature data

|                                    |                                    |                   |
|------------------------------------|------------------------------------|-------------------|
| Operating temperature              |                                    | - 40° C ~ + 85° C |
| Nominal operating cell temperature |                                    | 42° C ± 2° C      |
| Power temperature coefficient      | T <sub>K</sub> (P <sub>MPP</sub> ) | - 0.300 %/°C      |
| Voltage temperature coefficient    | T <sub>K</sub> (U <sub>OC</sub> )  | - 0.250 %/°C      |
| Current temperature coefficient    | T <sub>K</sub> (I <sub>SC</sub> )  | 0.045 %/°C        |

## Further information

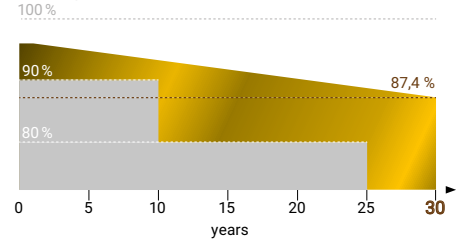
|                                    |  |
|------------------------------------|--|
| Number of cells                    | 108 N-Type bifacial monocrystalline half cells (6 x 18)                          |
| Cell size                          | 182 x 182 mm   |
| Module dimensions                  | 1722 x 1134 x 30 mm  |
| Type of Frame                      | black anodized aluminium alloy   |
| Max. system voltage                | 1500 V   |
| Reverse current loading capability | 30 A   |
| Glass thickness                    | Frontside/Backside: 2.0 mm/2.0 mm  |
| Weight                             | approx. 23.7 kg  |
| Module connection                  | MC4 or similar, 4.0 mm <sup>2</sup> , cable length: (+) ≥ 1200 mm, (-) ≥ 1200 mm |
| Junction box rating                | IP68   |
| Allowable Hail Load                | 50 mm iceball with velocity of 32,2 m/s  |
| Snow load                          | 5400 Pa ≙ 550 kg/m <sup>2</sup>  |
| Fire class                         | A according to IEC standard 61730-2 (UL 790, UL 1703)                            |

30 years product warranty, 30 years linear performance warranty according to our additional warranty conditions for solar power modules of the "Mono S4 Halfcut Innovation Powerline" product series, which we will gladly send you. Due to the tolerance of the anti-reflective coating, colour differences in the solar modules may occur.

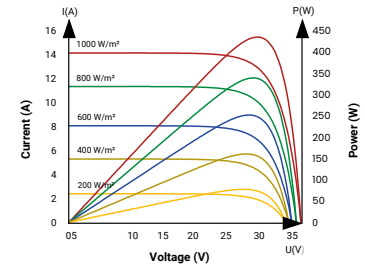
## Logistic

|                                |                |
|--------------------------------|----------------|
| Dimension pallet (L/W/H)       | 177/114/125 cm |
| Weight pallet                  | approx. 883 kg |
| Modules per pallet             | 36             |
| Modules per truck              | 1008           |
| Modules per Container [40' HC] | 936            |

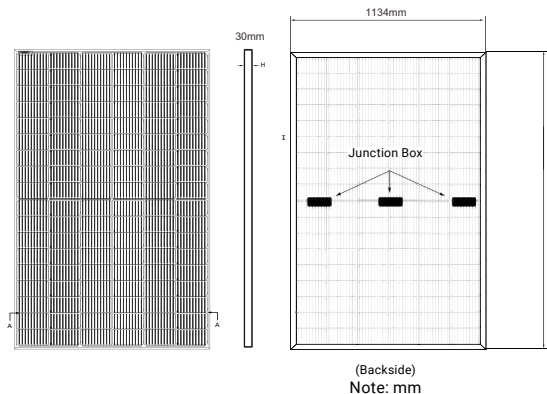
## Module performance



■ Linear performance warranty for Double-Glas Solar Modules  
 ■ Standard tiered warranty



## Mono S4 HC V XXX BF-DG (half cell module)



Note:  
 Ensure correct polarity!  
 Data with tolerance ± 1 mm

Errors and technical changes excepted. Illustration similar.

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