

# Mono S4 Halfcut | Black-White

**405 W / 410 W / 415 W**

Our standard module for low-cost entry and ideal for all types of applications in the residential and commercial sectors. The black and white appearance gives the module a classic and industrial character. Glass-foil module with monocrystalline P-type/PERC half cells.

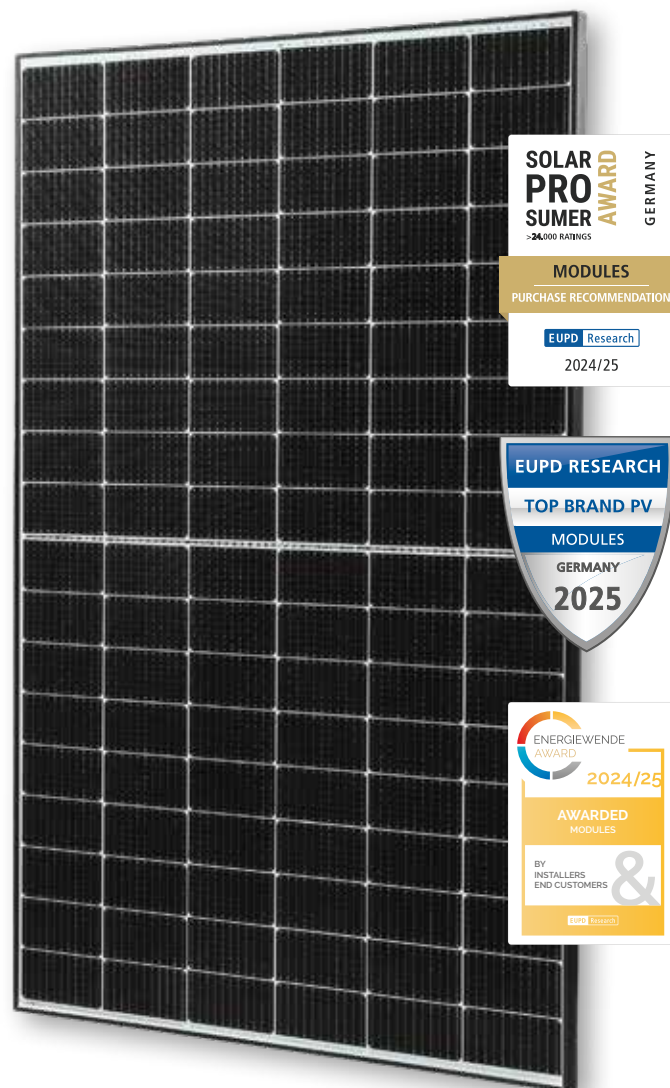
Especially suitable for:



Residential



Commercial



## Half-cell module

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



## Black-White

Solar module with white backsheet



## Self-cleaning

Highly transparent, self-cleaning glass



## Resistant to environmental influence

Resistant to ammonia & salt spray



## German warranty

15-year guarantee on the product and 25 years on the module performance



## P-Type technology

PERC solar module with P-Type technology for a top price/performance ratio



## Area utilisation

213 W/m<sup>2</sup> at 415 W. Top comparability thanks to wattage per square metre



## Multibusbar technology

Higher performance, greater reliability and higher (electrical) load capacity



## Low-light behaviour

Outstanding performance even under low light conditions

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## Electrical data under STC

(Standard Test Conditions: 1000 W/m<sup>2</sup>, 25 °C, AM 1.5, Measuring tolerance: ± 3%)

| Rated power                   | P <sub>max</sub> | 405 W   | 410 W   | 415 W   |
|-------------------------------|------------------|---------|---------|---------|
| Sorting limits of performance |                  | 0/+3 %  | 0/+3 %  | 0/+3 %  |
| Voltage                       | U <sub>MPP</sub> | 30.91 V | 31.09 V | 31.27 V |
| Open circuit voltage          | U <sub>OC</sub>  | 37.21 V | 37.33 V | 37.45 V |
| Current                       | I <sub>MPP</sub> | 13.11 A | 13.20 A | 13.29 A |
| Short-circuit current         | I <sub>SC</sub>  | 13.98 A | 14.06 A | 14.13 A |
| Efficiency                    |                  | 20.91 % | 21.17 % | 21.43 % |

## Temperature data

| Operating temperature              |                                    | - 40° C ~ + 85° C |
|------------------------------------|------------------------------------|-------------------|
| Nominal operating cell temperature |                                    | 42° C ± 3° C      |
| Power temperature coefficient      | T <sub>K</sub> (P <sub>MPP</sub> ) | - 0.330 %/°C      |
| Voltage temperature coefficient    | T <sub>K</sub> (U <sub>OC</sub> )  | - 0.246 %/°C      |
| Current temperature coefficient    | T <sub>K</sub> (I <sub>SC</sub> )  | 0.045 %/°C        |

## Further information

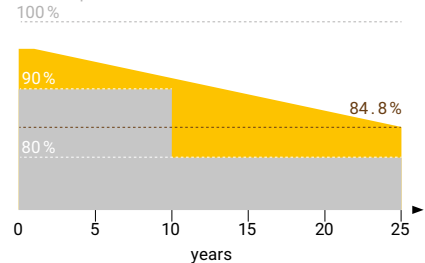
| Number of cells                    | 108 monocrystalline half cells (6 x 18)                                          |
|------------------------------------|----------------------------------------------------------------------------------|
| Cell size                          | 182 x 91 mm                                                                      |
| Module dimensions                  | 1722 x 1134 x 30 mm                                                              |
| Type of Frame                      | black anodized aluminium alloy                                                   |
| Max. system voltage                | 1500 V                                                                           |
| Reverse current loading capability | 25 A                                                                             |
| Glass thickness                    | 3.2 mm                                                                           |
| Weight                             | approx. 21.2 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                | 25 mm iceball with velocity of 23 m/s                                            |
| Snow load                          | 5400 Pa ± 550 kg/m <sup>2</sup>                                                  |

15-year product warranty, 25-year linear performance warranty according to our additional warranty conditions for solar power modules of the "Mono S4 Halfcut Black-White" 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.

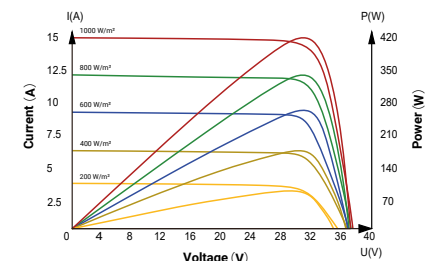
## Logistic

| Dimension pallet (L/W/H)       | 177/114/125 cm |
|--------------------------------|----------------|
| Weight pallet                  | approx. 793 kg |
| Modules per pallet             | 36             |
| Modules per truck              | 1008           |
| Modules per Container [40' HC] | 936            |

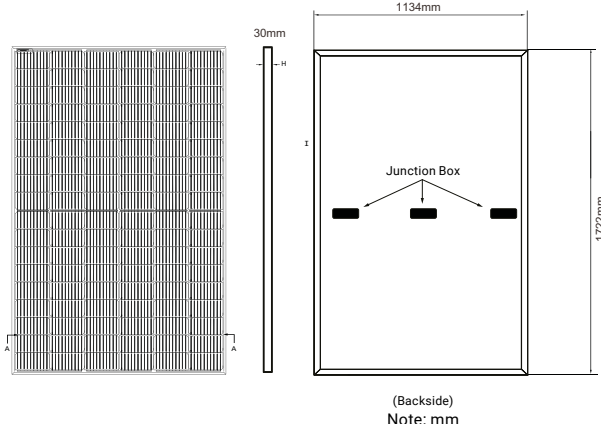
## Module performance



- Linear performance warranty
- Standard tiered warranty



## Mono S4 HC V XXX (half cell module)



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