

# Mono S4 Halfcut | Black-Black

405 W / 410 W

The almost 100% black module is the classic for all types of application in the residential and commercial sector with visible module surfaces. The black look is particularly popular in the design sector. 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-Black

Solar module with black 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 utilization

210 W/m<sup>2</sup> at 410 W. Top comparability thanks to wattage per square metre



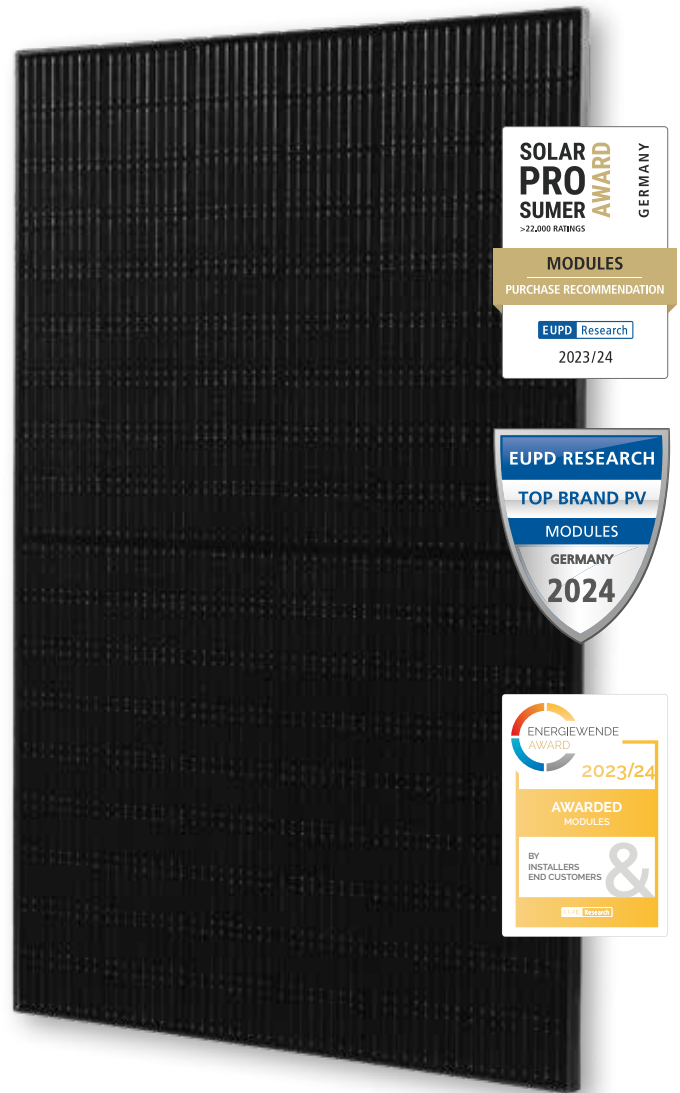
## Multibusbar technology

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	$P_{max}$	405 W	410 W
Sorting limits of performance		0/+3 %	0/+3 %
Voltage	$U_{MPP}$	30.91 V	31.09 V
Open circuit voltage	$U_{OC}$	37.21 V	37.33 V
Current	$I_{MPP}$	13.11 A	13.20 A
Short-circuit current	$I_{SC}$	13.98 A	14.06 A
Efficiency		20.74 %	21.00 %

### Temperature data

Operating temperature		- 40° C ~ + 85° C
Nominal operating cell temperature		42° C ± 3° C
Power temperature coefficient	$T_K (P_{MPP})$	- 0.330 %/°C
Voltage temperature coefficient	$T_K (U_{OC})$	- 0.246 %/°C
Current temperature coefficient	$T_K (I_{SC})$	0.0448 %/°C

### Further information

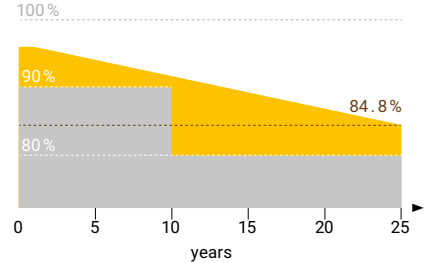
Number of cells	108 monocrystalline half cells (6 x 18)
Cell size	182 x 91 mm
Module dimensions	1722 x 1134 x 35 mm
Type of Frame	black anodized aluminium alloy
Max. system voltage	1500 V
Reverse current loading capability	25 A
Glass thickness	3.2 mm
Weight	approx. 21.2 kg
Module connection	MC4 or similar, 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-Black" 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.

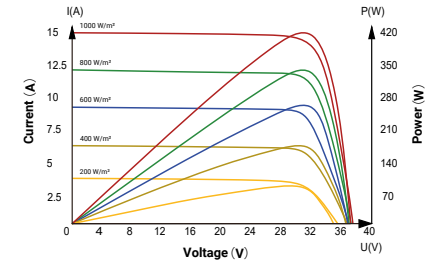
### Logistic

Dimension pallet (L/W/H)	177/114/125 cm
Weight pallet	approx. 694 kg
Modules per pallet	31
Modules per truck	868
Modules per Container [40' HC]	806

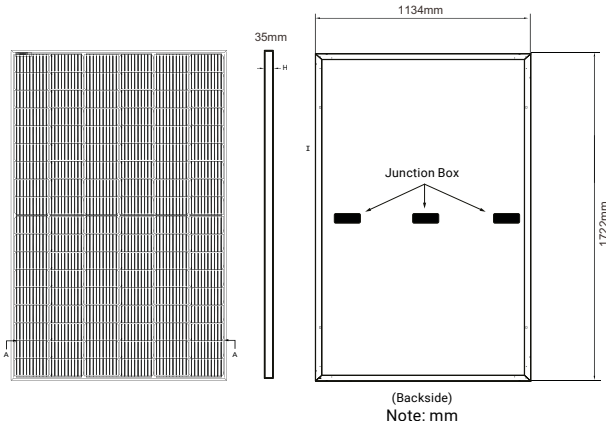
### Module performance



- Linear performance warranty
- Standard tiered warranty



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



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

Subject to technical modifications with corresponding follow-up certifications. Errors excepted. Illustration similar.

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