

GERMAN MANUFACTURER 

25 YEARS PRODUCT WARRANTY

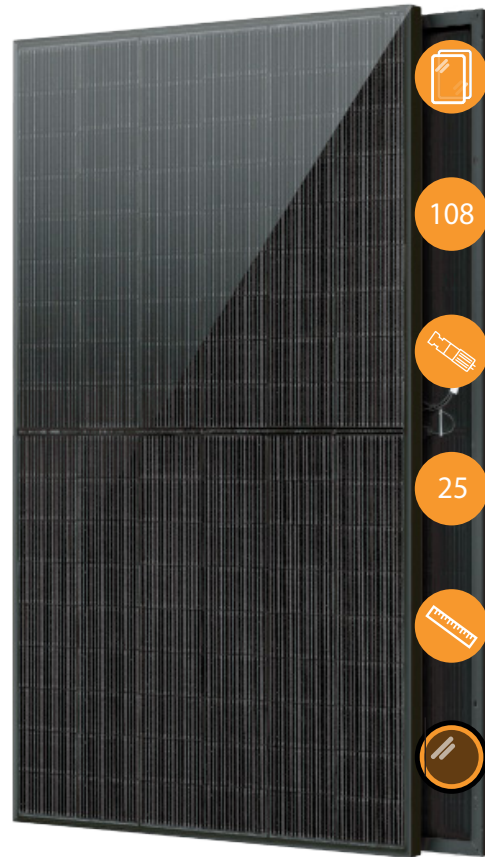
30 YEARS LINEAR POWER WARRANTY

## Strong Style BLACK MESH

### ASWS-450-MH108N-BMG

108 TOPCon n-Type, Half-cut, Bifacial, Double-Glass PV Module

**MAX. STC\*** | **Bifaciality up to**  
**450 W** | **486 W\*\***



DOUBLE-GLASS  
BLACK MESH



108 N-TYPE TOPCON  
HALF-CUT



MC4 OR MC4  
COMPATIBLE



25 YEARS  
PRODUCT WARRANTY



1762x1134x30 mm



FRAME: BLACK  
BACK: GLASS



#### POSITIVE ENERGY BALANCE

Double-sided power generation shortens the amortization period. A longer lifetime ensures a positive energy balance.



#### HIGH EFFICIENCY

Module power reaches output of 450 Watt/ Modules efficiency reaches 22.50 %.



#### PID-RESISTANT

PID-resistant modules are engineered to withstand degradation effects, ensuring consistent performance and reliability.



#### WIDE APPLICATION

Suitable for vertical installation, projects on outdoor areas and especially for installation areas with high fire protection requirements.



#### BIFACIALITY

Higher yield due to double-sided power generation. At 10% irradiation ratio, the power output is 486 W.



#### DOUBLE-GLASS

Higher mechanical load capacity thanks to double-glass. In addition, cells are effectively protected from environmental influences. Due to a glass thickness of 1.6 mm, the total weight is only 22.5 kg.

# Strong Style Black Mesh ASWS-450-MH108N-BMG

108 TOPCon n-Type, Half-cut, Bifacial, Double-Glass PV Module

## Mechanical Data

Cell Type	TOPCon, n-Type, bifacial
Cell Arrangement	108 monocrystalline silicon (6x18)
Module Dimensions	1762x1134x30 mm
Weight	22.5 kg
Glass	1.6 mm tempered glass
Backsheet	1.6 mm tempered glass
Frame Material	aluminum hollow-chamber frame, anodized aluminum alloy (black)
Junction Box	Protection class $\geq$ IP68
Cable	4.0 mm <sup>2</sup> , positive pole: 1400 mm, negative pole: 1400 mm
Maximum Test Load Pull / Push	3600 Pa (IEC61215) cover (snow) / 2400 Pa (IEC61215) front and back (wind)
Connector	MC4 or MC4 compatible
No. of Bypass Diodes	3

## Electrical Data (STC)\*

Maximum Power (Pmax/W)	440	445	450
Voltage at Maximum Power (Vmp/V)	32.47	32.65	32.82
Current at Maximum Power (Imp/A)	13.55	13.63	13.71
Open Circuit Voltage (Voc/V)	38.90	39.10	39.30
Short Circuit Current (Isc/A)	14.31	14.40	14.48
Module Efficiency (%)	22.00	22.30	22.50
Power Sorting (W)	0 ~ +5	0 ~ +5	0 ~ +5
Bifaciality (%)	80 (~ +3)	80 (~ +3)	80 (~ +3)

## Electrical Characteristics with 10 % Solar Irradiation Ratio\*\*

Maximum Power (Pmax/W)	475	481	486
Voltage at Maximum Power (Vmp/V)	32.47	32.65	32.82
Current at Maximum Power (Imp/A)	14.63	14.72	14.81
Open Circuit Voltage (Voc/V)	38.9	39.1	39.3
Short Circuit Current (Isc/A)	15.46	15.55	15.64

\* STC (Standard Testing Conditions): Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, AM 1.5

## Temperature Coefficients

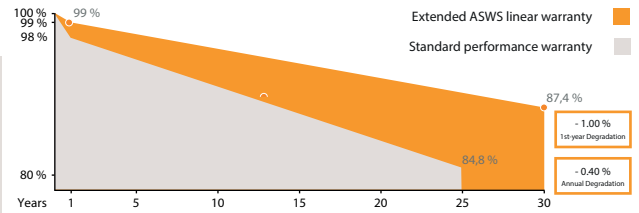
Temperature Coefficient (Pm)	-0.30 %/°C
Temperature Coefficient (Voc)	-0.26 %/°C
Temperature Coefficient (Isc)	0,046 %/°C

## Operating Parameters

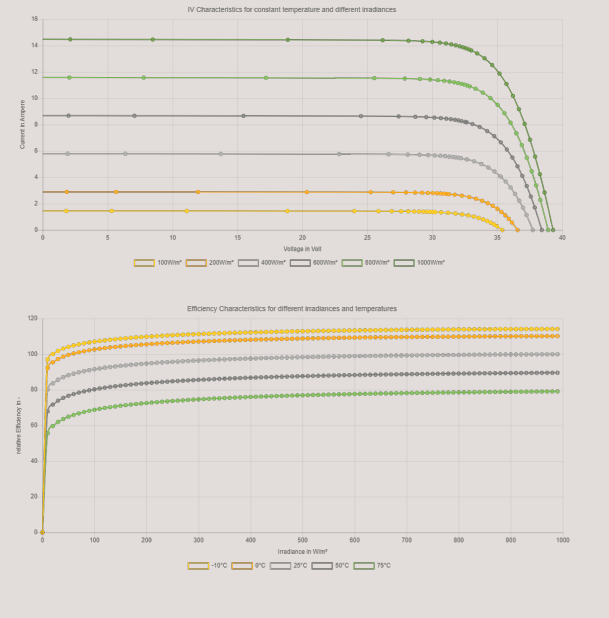
Maximum System Voltage	1500 V (DC)
Operating Temperature	-40°C ~ +85°C
NMOT (Nominal Module Operating Temperature)	45°C ± 2°C

## Linear Performance Warranty

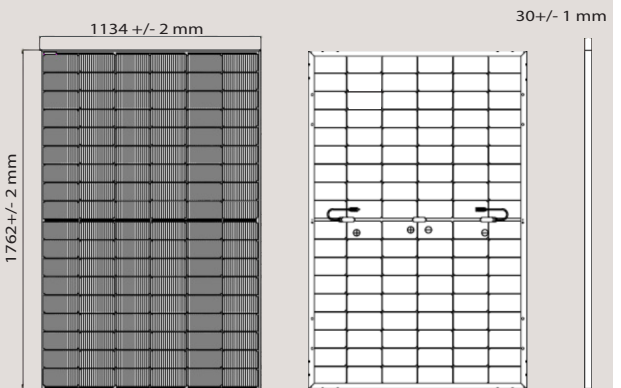
25-year product warranty / 30-year linear power warranty



## Curves (450W)



## Module Dimensions (mm)



## Packaging

Modules per Pallet:	36 pcs
Modules per 40'HQ Container:	936 pcs
Weight per Pallet:	845 kg
Weight per Pallet:	1790x1120x1260mm

LVD  
EMC

CE



Class II



IEC 61215 / IEC 61730

WEEE-Reg.-Nr. DE 15553592



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