GERMAN MANUFACTURER

30 YEARS PRODUCT WARRANTY

30 YEARS LINEAR POWER WARRANTY

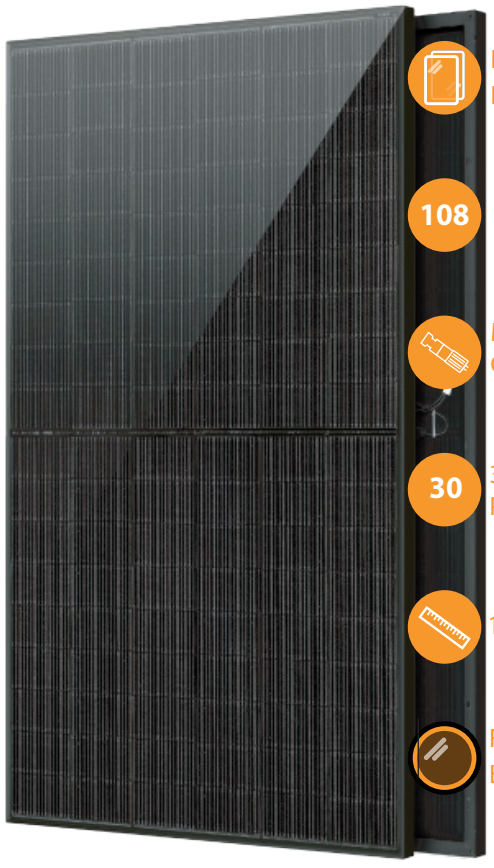
Strong Style
BLACK MESH

ASWS-450-MH108N-BMG

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

MAX. STC*
450 W

Bifaciality up to
486 W**



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 degredation 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.

ASWS
from sun to power

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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 (6×18)
Module Dimensions	1762×1134×30 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 ≥IP68
Cable	4.0 mm², 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/m², Cell Temperature 25°C, AM 1.5

Temperature Coefficients

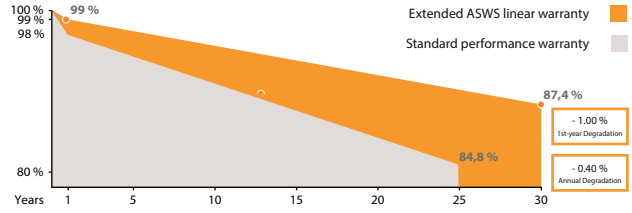
Temperature Coefficient (Pm)	-0.30 %/°C
Temperature Coefficient (Voc)	-0.26 %/°C
Temperature Coefficient (Isc)	0,046 %/°C

Operating Parameters

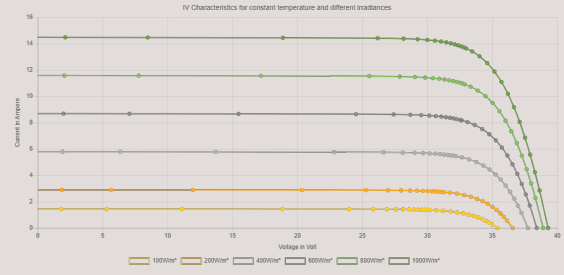
Maximum System Voltage	1500 V (DC)
Operating Temperature	-40°C ~ +85°C
NMOT (Nominal Module Operating Temperature)	45°C ± 2°C

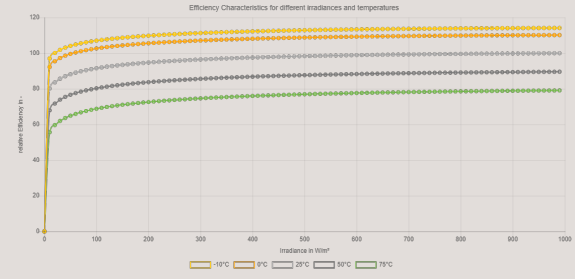
Linear performance Warranty

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

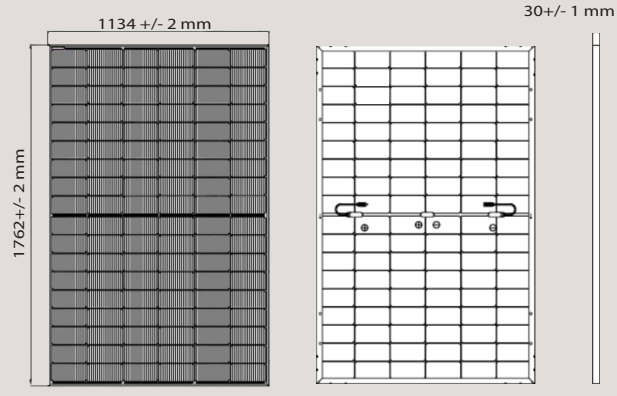


Curves (450W)





Module Dimensions (mm)



Packaging

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

LVD EMC CE Class II

IEC 61215 / IEC 61730

WEEE-Reg.-Nr. DE 15553592

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