



HC MONO

430 - 450 Watt Total Black



Key features

- ✓ Passed IEC 5400 Pa mechanical loading test.
- ✓ The modules can withstand high wind-pressure, snow loads and extreme temperatures.
- ✓ Our high performing modules have an industry low tolerance of 0±5%.
- ✓ Our solar cells offer high conversion efficiency to ensure the highest quality.
- ✓ Highest quality with our cells.

Highest quality with our cells.
16MBB Top Con Technology

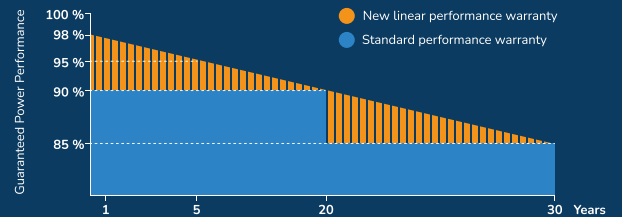


Quality and safety

- ✓ Industry leading power output warranty
20 years / 90%
30 years / 85,2%
- ✓ 30-year warranty on materials & workmanship
- ✓ Fire test: Class 1



Premium performance warranty



Applications



On-grid residential roof-tops



On-grid commercial-industrial roof-tops

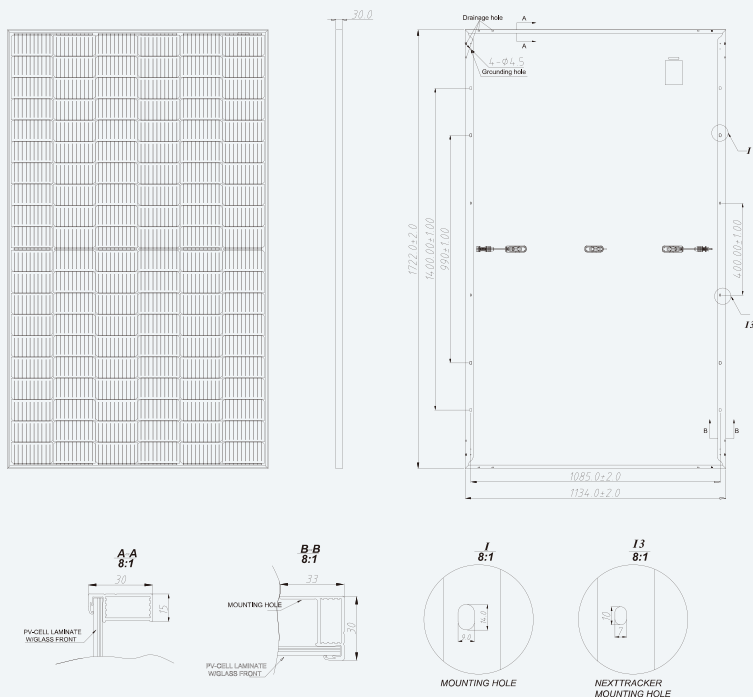


Solar power plants



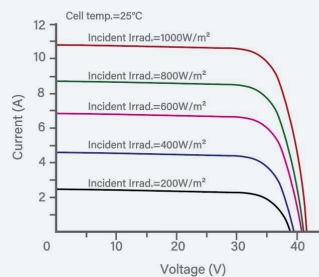
Off-grid systems

Engineering drawings

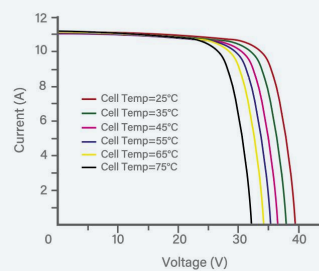


Electrical performance & temperature dependence

Current-Voltage & Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures



Electrical characteristics

Module Type	SNG430M-108	SNG435M-108	SNG440M-108	SNG445M-108	SNG450M-108
TESTING CONDITION⁽¹⁾	STC⁽²⁾/NMOT⁽³⁾	STC⁽²⁾/NMOT⁽³⁾	STC⁽²⁾/NMOT⁽³⁾	STC⁽²⁾/NMOT⁽³⁾	STC⁽²⁾/NMOT⁽³⁾
Maximum Power (P _{max})	430Wp/325Wp	435Wp/329Wp	440Wp/333Wp	445Wp/337Wp	450Wp/341Wp
Maximum Power Voltage (V _{mp})	32.86V/30.84V	33.05V/31.02V	33.24V/31.20V	33.43V/31.38V	33.62V/31.55V
Maximum Power Current (I _{mp})	13.09A/10.56A	13.17A/10.62A	13.24A/10.68A	13.32A/10.74A	13.39A/10.80A
Open-circuit Voltage (V _{oc})	39.77V/37.99V	40.00V/38.21V	40.23V/38.42V	40.46V/38.64V	40.69 V/38.86V
Short-circuit Current (I _{sc})	13.83A/11.16A	13.91A/11.23A	13.99A/11.29A	14.06A/11.35A	14.14A/11.41A
Module Efficiency (%)	22%	22.3%	22.5%	22.8%	23%
Operating Temperature (°C)		-40°C ± ~ +85°C			
Maximum system voltage		1500V			
Maximum series fuse rating		25A			
Power tolerance		±5%			
Temperature coefficients of P _{max}		-0.29%/°C			
Temperature coefficients of V _{oc}		-0.25%/°C			
Temperature coefficients of I _{sc}		0.045%/°C			
Nominal operating cell temperature (NOCT)		45±2°C			

Mechanical data

Cell type	Topcon Mono-crystalline (182mmx91mm)
No. of cells	108 (2x54)
Dimensions	1722x1134x30mm 1722x1134x35mm
Weight	30mm : 23 kg 35mm : 23.5 kg
Front Glass	3.2mm anti-reflective
Frame	Anodized Aluminium Alloy Total Black
Junction Box	IP68 Rated
Output Cables	TUV: 1x4.0mm ² UL 12AWG Length: 1100mm or customized length *3-2 mm transmission low iron Ar Coating Glass
Connectors	Copper, Silver Plated, MC 4

Packaging configuration

Dimensions	30mm	35mm
No. of pieces per pallet	36	31
Total number of pallets	26	28
Module quantity per 40'container (pcs)	936	868

(1) Measurement Tolerances: P_{max} (+/- 5%), I_{sc} & V_{oc} (+/- 5%) - Power Classification 0/+5%

(2) STC (Standard Testing Condition): Irradiance 1000w/m², Cell Temperature 25°C, AM 1.5

(3) NMOT (Nominal Operating Module Temperature): Irradiance 800/m², NMOT, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

STC/NMOT



Irradiance 1000W/m² / 800W/m²



Module Temperature 25°C



AM = 1.5