

# HC MONO 420 Watt Red Frame



## 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  $0\pm 5\%$ .
- ✔ Our solar cells offer high conversion efficiency to ensure the highest quality.
- ✔ Highest quality with our cells.

Highest quality with our cells.  
16 MBB Half Cut N-Type Technology

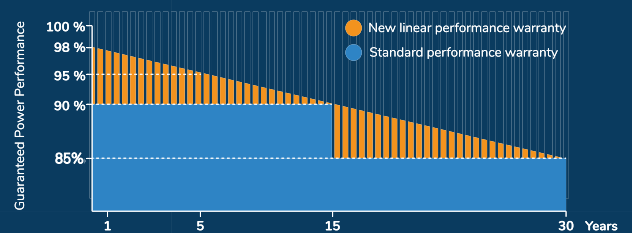


## Quality and safety

- ✔ Industry leading power output warranty  
15 years / 90%  
30 years/85.2%
- ✔ 25-year warranty on materials & workmanship
- ✔ Fire test: Class 1



## Premium performance warranty



## Applications



On-grid residential roof-tops



On-grid commercial-industrial roof-tops

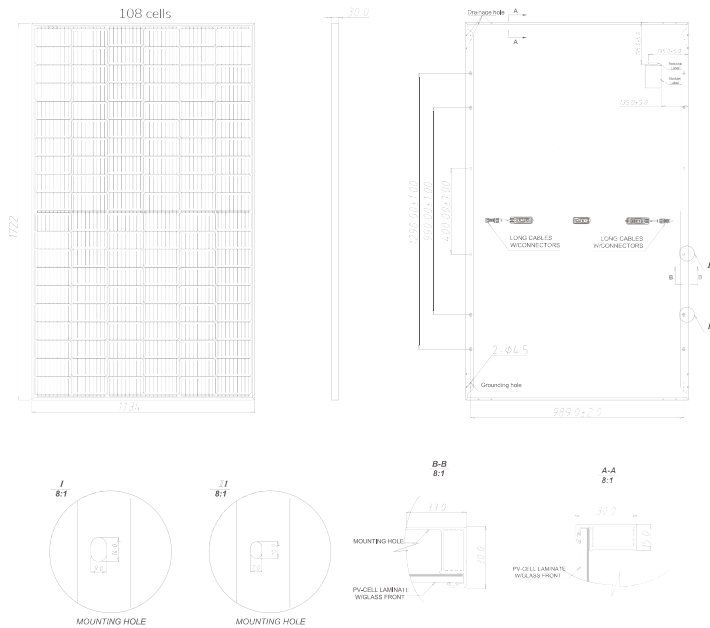


Solar power plants



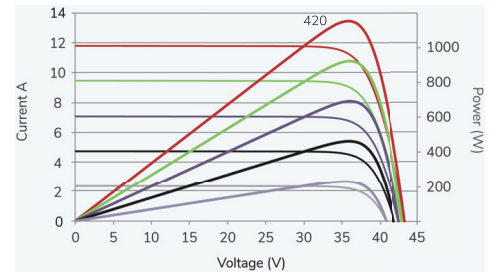
Off-grid systems

## Engineering drawings

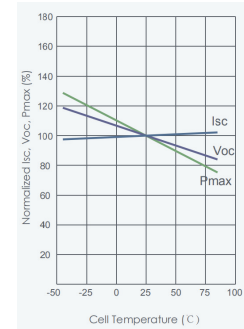


## Electrical performance & temperature dependence

Current-Voltage & Power-Voltage Curves (420W)



Temperature Dependence of ISC, Voc, Pmax



## Electrical characteristics

|   |   |
|---|---|
| Module Type                               | SNG420M-108                                 |
| <b>TESTING CONDITION<sup>(1)</sup></b>    | <b>STC<sup>(2)</sup>/NMOT<sup>(3)</sup></b> |
| Maximum Power (Pmax)                      | 420Wp/318Wp                                 |
| Maximum Power Voltage (Vmp)               | 32.48V/30.49V                               |
| Maximum Power Current (Imp)               | 12.94A/10.44A                               |
| Open-circuit Voltage (Voc)                | 39.31V/37.55V                               |
| Short-circuit Current (Isc)               | 13.66A/11.03A                               |
| Cell Efficiency                           | 23.7%                                       |
| Module Efficiency (%)                     | 21.5%                                       |
| Operating Temperature 0C                  | -40°C ~ +85°C                               |
| Maximum system voltage                    | 1500V                                       |
| Maximum series fuse rating                | 25A   |
| Power tolerance                           | ±5%   |
| Temperature coefficients of Pmax          | -0.29%/°C                                   |
| Temperature coefficients of Voc           | -0.25%/°C                                   |
| Temperature coefficients of Isc           | 0.045%/°C                                   |
| Nominal operating cell temperature (NOCT) | 45±2°                                       |

## Mechanical data

|               |  |
|---------------|--|
| Cell type     | Half Cut N-Type Technology (182x91mm)  |
| No. of cells  | 108 (2x54)   |
| Dimensions    | 1722x1134x30mm   |
| Weight        | 30mm : 19.5kg<br>35mm : 20kg   |
| Front Glass   | 3.2 mm anti-reflective   |
| Frame         | Anodized Aluminium Alloy Red Frame   |
| Junction Box  | IP68 Rated   |
| Output Cables | TUV: 4.0mm <sup>2</sup><br>UL: 12AWG<br>Length: 1100mm<br>or customized length |
| 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: Pmax (+/- 5%), Isc & Voc (+/- 5%) - Power Classification 0/+5%

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

(3) NMOT (Nominal Operating Module Temperature): Irradiance 800W/m<sup>2</sup>, NMOT: Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

STC/NMOT



Irradiance 1000W/m<sup>2</sup> / 800W/m<sup>2</sup>



Module Temperature 25°C



AM = 1.5