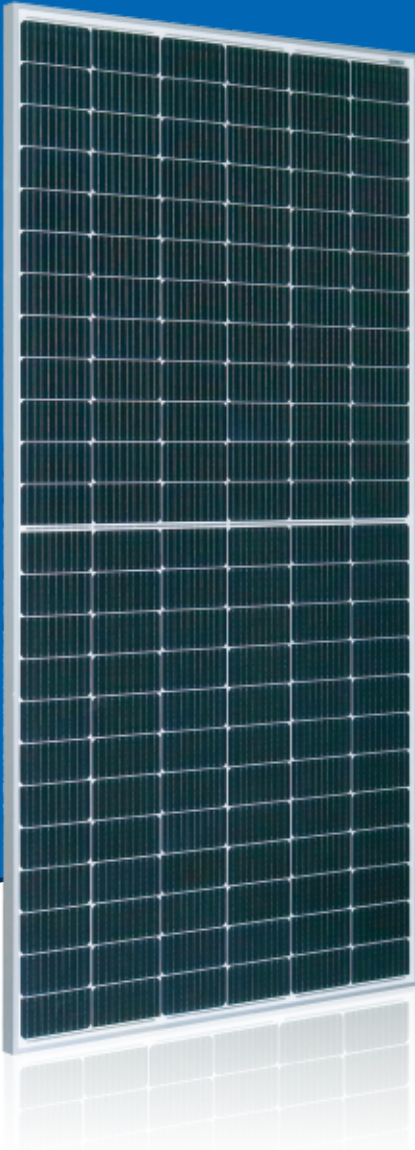


AstroSemi™

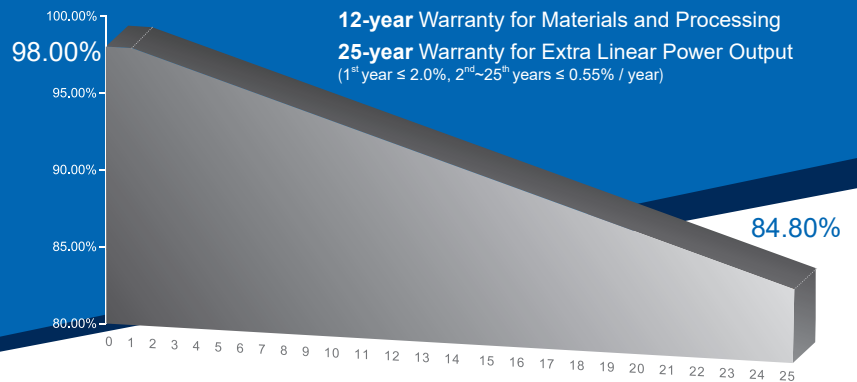
Incredible Power for Small Body



440W~455W

Monocrystalline PV Module

CHSM72M-HC Series (166)



KEY FEATURES



OUTPUT POSITIVE TOLERANCE

Guaranteed 0~+5W positive tolerance ensures power output reliability.



INNOVATIONAL HALF-CELL TECHNOLOGY

Improves the module output, decreases the risk of micro-crack, enhances the module reliability.



INNOVATIVE PERC CELL TECHNOLOGY

Excellent cell efficiency and output.



REDUCE SHADOW LOSS

Effectively reduces the effect of shadow on the module surface.



REDUCE INTERNAL MISMATCH LOSS

Reduces mismatch loss and improves output.



PASSED HAIL TEST

Certified to hail resistance: ice ball size (d=25mm) and ice ball velocity (v=23m/s).



ANTI PID RESISTANCE

Excellent PID resistance at 96 hours (@85°C /85%) test, and also can be improved to meet higher standards for the particularly harsh environment.

COMPREHENSIVE CERTIFICATES



First solar company which passed the TUV Nord IEC/TS 62941 certification audit.

Preliminary
For Global Market



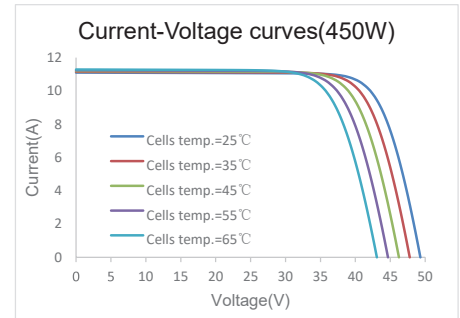
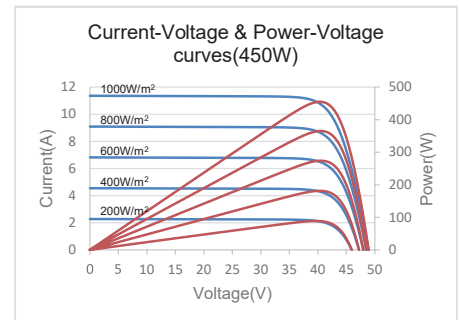
ASTRONERGY
A CHNT COMPANY

ELECTRICAL SPECIFICATIONS

| | | | | |
|---|---------------------|----------|----------|----------|
| STC rated output (P_{mpp})* | 440 Wp | 445 Wp | 450 Wp | 455 Wp |
| Rated voltage (V_{mpp}) at STC | 40.85 V | 41.05 V | 41.32 V | 41.51 V |
| Rated current (I_{mpp}) at STC | 10.77 A | 10.84 A | 10.89 A | 10.96 A |
| Open circuit voltage (V_{oc}) at STC | 48.50 V | 48.80 V | 49.05 V | 49.35 V |
| Short circuit current (I_{sc}) at STC | 11.24 A | 11.30 A | 11.37 A | 11.44 A |
| Module efficiency | 20.2% | 20.5% | 20.7% | 20.9% |
| Rated output (P_{mpp}) at NMOT | 327.1 Wp | 330.8 Wp | 334.5 Wp | 338.2 Wp |
| Rated voltage (V_{mpp}) at NMOT | 37.93 V | 38.12 V | 38.37 V | 38.55 V |
| Rated current (I_{mpp}) at NMOT | 8.62 A | 8.68 A | 8.72 A | 8.78 A |
| Open circuit voltage (V_{oc}) at NMOT | 45.42 V | 45.70 V | 45.94 V | 46.22 V |
| Short circuit current (I_{sc}) at NMOT | 9.06 A | 9.10 A | 9.16 A | 9.22 A |
| Temperature coefficient (P_{mpp}) | - 0.35%/°C | | | |
| Temperature coefficient (I_{sc}) | +0.04%/°C | | | |
| Temperature coefficient (V_{oc}) | - 0.28%/°C | | | |
| Nominal module operating temperature (NMOT) | 44±2°C | | | |
| Maximum system voltage (IEC/UL) | 1500V _{DC} | | | |
| Number of diodes | 3 | | | |
| Junction box IP rating | IP 68 | | | |
| Maximum series fuse rating | 20 A | | | |

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5
 NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s

CURVE



MECHANICAL SPECIFICATIONS

| | |
|--------------------------------|--|
| Outer dimensions (L x W x H) | 2094 x 1038 x 35 mm |
| Frame technology | Aluminum, silver anodized |
| Module composition | Glass / EVA / Backsheet (white) |
| Front glass thickness | 3.2 mm |
| Cable length (IEC/UL) | Portrait: 300 mm Landscape: 1300 mm |
| Cable diameter (IEC/UL) | 4 mm ² / 12 AWG |
| ① Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Fire performance (IEC/UL) | Class C (IEC) or Type 4 (UL) |
| Connector type (IEC/UL) | MC4 compatible |

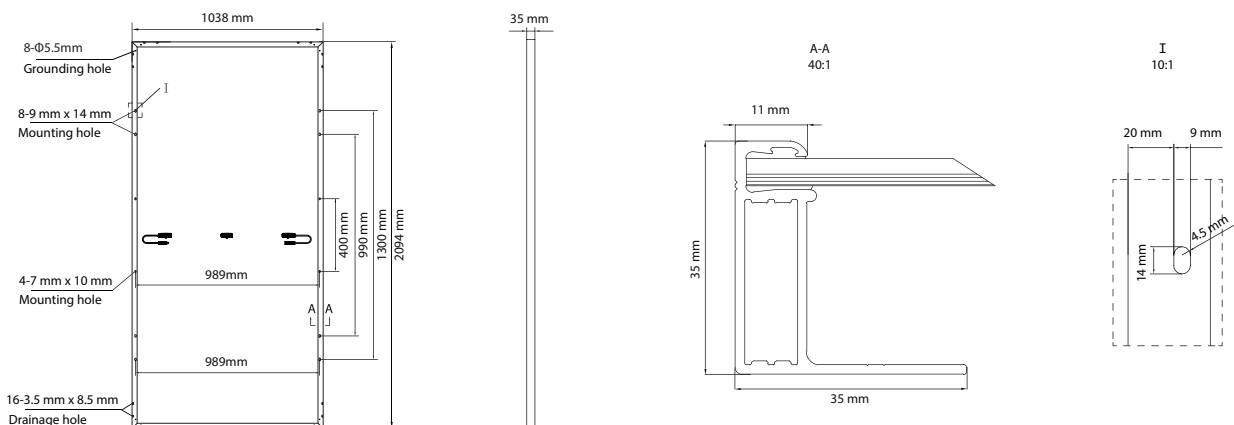
① Refer to Astronergy crystalline installation manual or contact technical department.
 Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

PACKING SPECIFICATIONS

| | |
|--|--------------|
| ① Weight (module only) | 23.5 kg |
| ② Packing unit | 31 pcs / box |
| Weight of packing unit (for 40'HQ container) | 770 kg |
| Number of modules per 40'HQ container | 682 pcs |

① Tolerance +/- 1.0kg
 ② Subject to sales contract

MODULE DIMENSION DETAILS



© Chint Solar (Zhejiang) Co., Ltd. Reserves the right of final interpretation. please contact our company to use the latest version for contract.