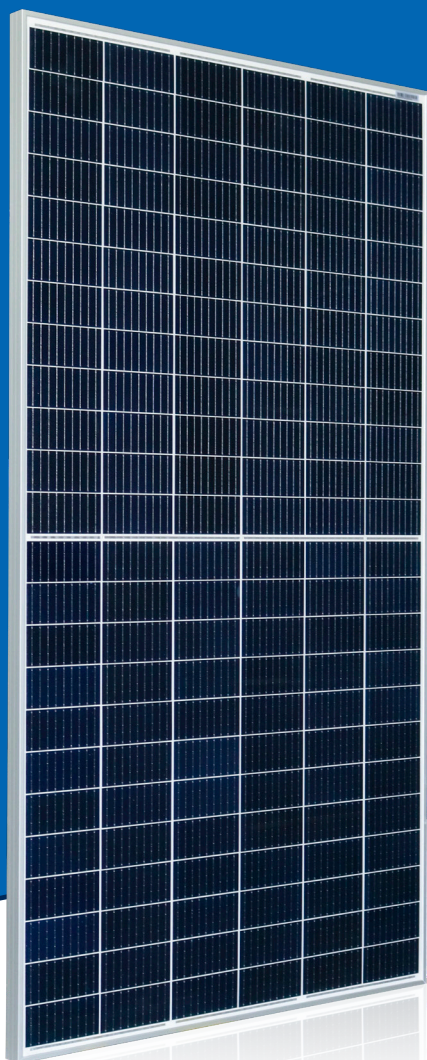


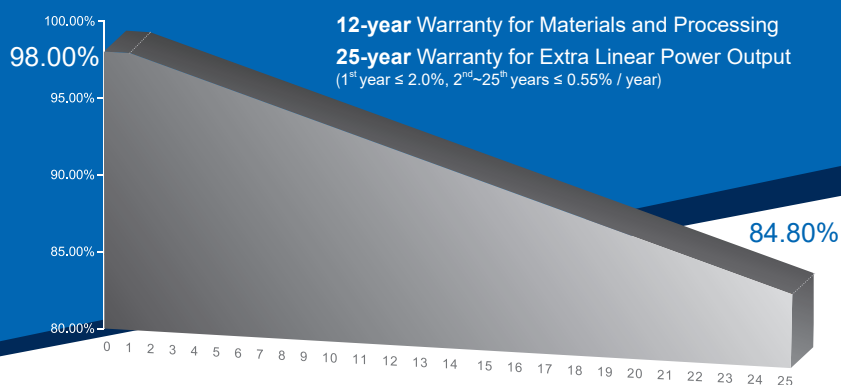
AstroSemi™

Incredible Power for Small Body



405W~420W

Monocrystalline PV Module
CHSM72M-HC Series (158.75)



KEY FEATURES

- OUTPUT POSITIVE TOLERANCE**
 Guaranteed 0~+5W positive tolerance ensure power output reliability.
- INNOVATIONAL HALF-CELL TECHNOLOGY**
 Improve the module output, decrease the risk of micro cracking, enhance the module reliability.
- INNOVATIVE PERC CELL TECHNOLOGY**
 Excellent cell efficiency and output.
- REDUCE SHADOW LOSS**
 Effectively reduce the effect of shading on the module surface.
- REDUCE INTERNAL MISMATCH LOSS**
 Reduce mismatch loss and improve 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.

For Global Market



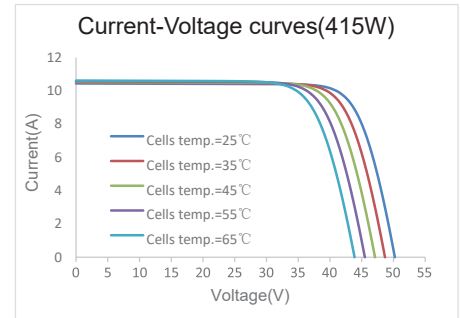
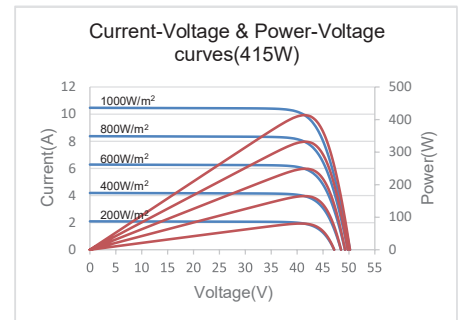
ASTRONERGY
A CHNT COMPANY

ELECTRICAL SPECIFICATIONS

STC rated output (P_{mpp})*	405 Wp	410 Wp	415 Wp	420 Wp
Rated voltage (V_{mpp}) at STC	41.59 V	41.85 V	42.11 V	42.35 V
Rated current (I_{mpp}) at STC	9.74 A	9.80 A	9.86 A	9.92 A
Open circuit voltage (V_{oc}) at STC	49.53 V	49.80 V	50.06 V	50.32 V
Short circuit current (I_{sc}) at STC	10.31 A	10.38 A	10.45 A <td 10.52 A	
Module efficiency	20.0%	20.3%	20.5%	20.8%
Rated output (P_{mpp}) at NMOT	301.1 Wp	304.8 Wp	308.5 Wp	312.2 Wp
Rated voltage (V_{mpp}) at NMOT	38.61 V	38.84 V	39.08 V	39.31 V
Rated current (I_{mpp}) at NMOT	7.80 A	7.85 A	7.89 A	7.94 A
Open circuit voltage (V_{oc}) at NMOT	46.38 V	46.64 V	46.88 V	47.12 V
Short circuit current (I_{sc}) at NMOT	8.31 A	8.36 A	8.42 A	8.48 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)	2018 x 1002 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: 350 mm Landscape: 1200 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 1 (UL)
Connector type (IEC/UL)	MC4 compatible

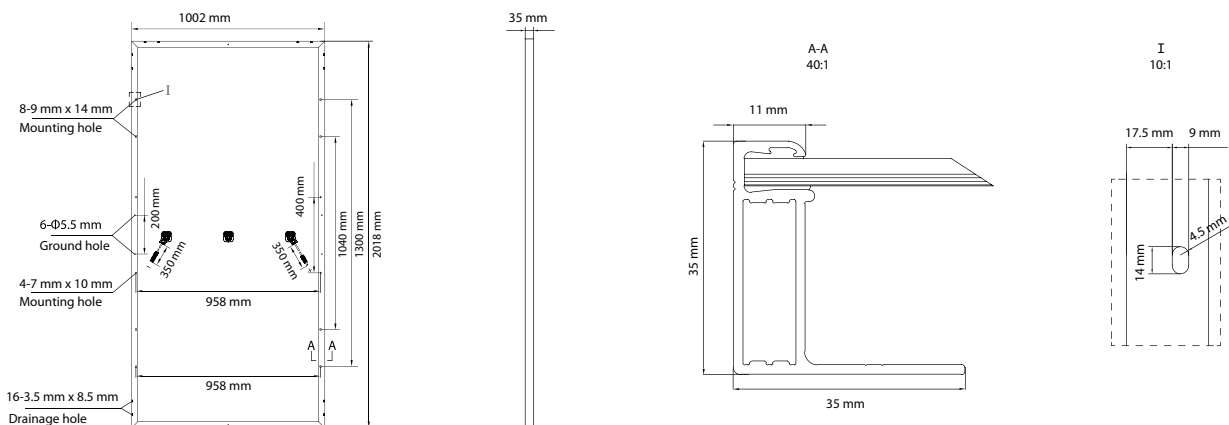
① Refer to Astronergy crystalline installation manual or contact technical department.
 Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

PACKING SPECIFICATIONS

① Weight (module only)	22.6 kg
② Packing unit	31 pcs / box
Weight of packing unit (for 40'HQ container)	748 kg
Number of modules per 40'HQ container	682 pcs

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

MODULE DIMENSION DETAILS



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