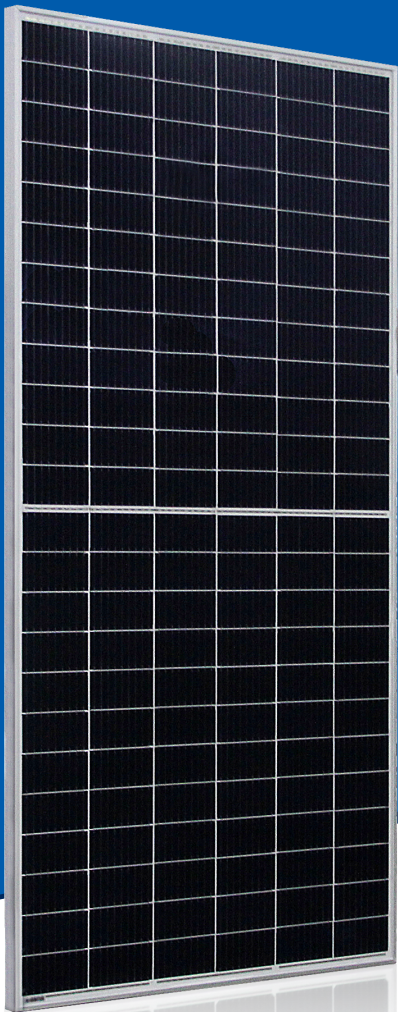


# AstroSemi™

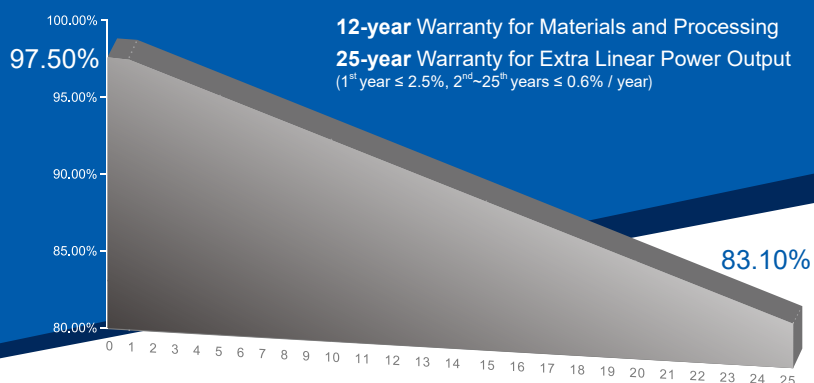
Incredible Power for Small Body







## 405W~420W

Monocrystalline PV Module

CHSM72M-HC Series (158.75)



### KEY FEATURES

- 
**+5W 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.
- 
**REDUCE SHADOW LOSS**  
 Effectively reduces the effect of shadow on the module surface.
- 
**REDUCE INTERNAL MISMATCH LOSS**  
 Reduces mismatch loss and improves output.

### COMPREHENSIVE CERTIFICATES



Special for Australian Market



**ASTRONERGY**  
 A CHNT COMPANY

## ELECTRICAL SPECIFICATIONS

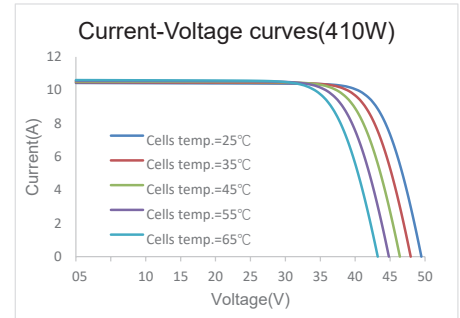
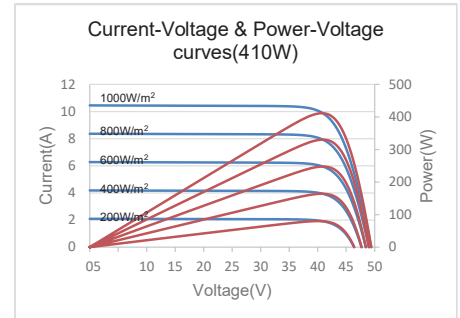
STC rated output ( $P_{mpp}$ )*	405 Wp	410 Wp	415 Wp	420 Wp
Rated voltage ( $V_{mpp}$ ) at STC	41.59 V	41.85 V	42.11 V	42.36 V
Rated current ( $I_{mpp}$ ) at STC	9.74 A	9.80 A	9.86 A	9.92 A
Open circuit voltage ( $V_{oc}$ ) at STC	49.53 V	49.80 V	50.06 V	50.32 V
Short circuit current ( $I_{sc}$ ) at STC	10.31 A	10.38 A	10.45 A	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 ( $P_{mpp}$ )	- 0.3528%/°C			
Temperature coefficient ( $I_{sc}$ )	+0.0400%/°C			
Temperature coefficient ( $V_{oc}$ )	- 0.2769%/°C			
Nominal module operating temperature (NMOT)	44±2°C			
Maximum system voltage (IEC/UL)	1500V <sub>DC</sub>			
Number of diodes	3			
Junction box IP rating	IP 67			
Maximum series fuse rating	20 A			

\* Measurement tolerance +/- 3%

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

NMOT: Irradiance 800W/m<sup>2</sup>, 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 40 mm 79.45 x 39.45 x 1.57 in
Frame technology	Aluminum, silver anodized
Module composition	Glass / EVA / Backsheet (white)
Front glass thickness	3.2 mm / 0.13 in
Cable length (IEC/UL)	Portrait: 350 mm (13.78 in) Landscape: 1200 mm (47.24 in)
Cable diameter (IEC/UL)	4 mm <sup>2</sup> / 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)	PV-CY03L (Logo: CHUANG YUAN) or PV-HCB40 (Logo: XINHUI) or MH5 (Logo: MINGHE) or PV-KST4-EVO2/XY-UR, PV-KBT4-EVO2/XY-UR (Logo: MC)

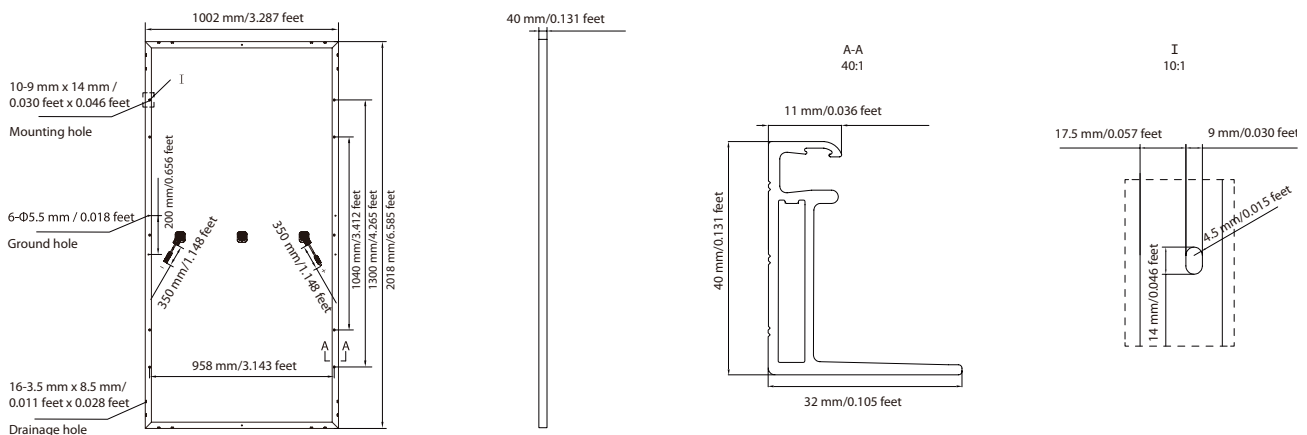
① Refer to Astronergy crystalline installation manual or contact technical department.  
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

## PACKING SPECIFICATIONS

① Weight (module only)	22.8 kg / 50.27 lbs
② Packing unit	27 pcs / box
Weight of packing unit (for 40'HQ container)	663 kg / 1462 lbs
Number of modules per 40'HQ container	594 pcs

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

## MODULE DIMENSION DETAILS



Made in Zhejiang, Jiangsu and Anhui of China, Made in Sincan/ Ankara of Turkey

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Astronergy 03-2020