

# ASTRO 5 Semi

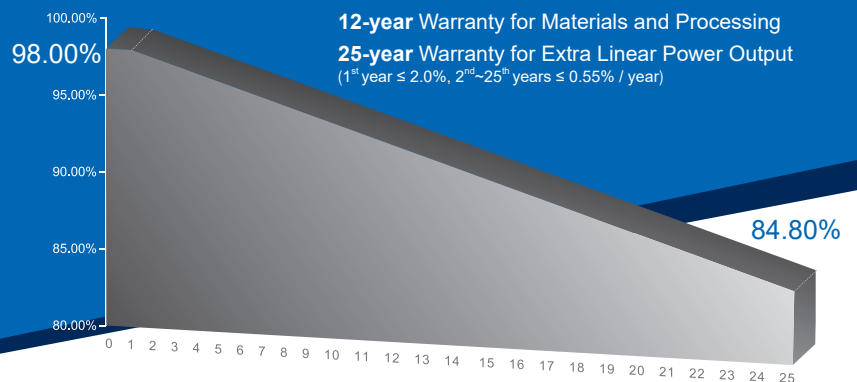
Create Sustainable and Efficient Green Energy



## 525W~545W

Monocrystalline PV Module

CHSM72M-HC Series (182)



### KEY FEATURES

- +5W OUTPUT POSITIVE TOLERANCE**  
Guaranteed 0~+5W positive tolerance to ensure power output.
- NON-DESTRUCTIVE CUTTING**  
Higher bending strength of cells and mechanical properties of modules.
- HIGH CUSTOMER VALUE**  
Lower BOS cost and LCOE.
- INNOVATIONAL HALF-CUT&MULTI-BUSBAR TECHNOLOGY**  
Lower risk of microcrack, better shading tolerance, higher reliability.
- SUPER PERC+ CELL TECHNOLOGY**  
Higher module power and module efficiency, lower power degradation.
- Anti PID PID RESISTANCE**  
Excellent PID resistance.

### COMPREHENSIVE CERTIFICATES



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

For Global Market



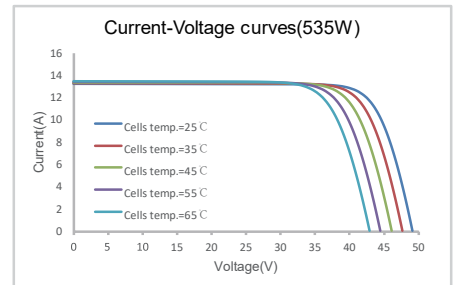
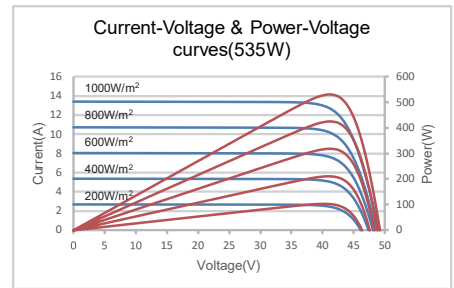
**ASTRONERGY**  
A CHNT COMPANY

## ELECTRICAL SPECIFICATIONS

STC rated output ( $P_{mpp}$ )	525 Wp	530 Wp	535 Wp	540 Wp	545 Wp
Rated voltage ( $V_{mpp}$ ) at STC	41.26 V	41.43 V	41.60 V	41.76 V	41.93 V
Rated current ( $I_{mpp}$ ) at STC	12.72 A	12.79 A	12.86 A	12.93 A	13.00 A
Open circuit voltage ( $V_{oc}$ ) at STC	49.10 V	49.30 V	49.50 V	49.70 V	49.90 V
Short circuit current ( $I_{sc}$ ) at STC	13.43 A	13.52 A	13.61 A	13.72 A	13.81 A
Module efficiency	20.5%	20.7%	20.9%	21.1%	21.3%
Rated output ( $P_{mpp}$ ) at NMOT	392.3 Wp	396.1 Wp	399.8 Wp	403.5 Wp	407.3 Wp
Rated voltage ( $V_{mpp}$ ) at NMOT	38.45 V	38.61 V	38.77 V	38.92 V	39.08 V
Rated current ( $I_{mpp}$ ) at NMOT	10.20 A	10.26 A	10.31 A	10.37 A	10.42 A
Open circuit voltage ( $V_{oc}$ ) at NMOT	46.40 V	46.59 V	46.78 V	46.97 V	47.16 V
Short circuit current ( $I_{sc}$ ) at NMOT	10.90 A	10.97 A	11.04 A	11.13 A	11.20 A
Temperature coefficient ( $P_{mpp}$ )	- 0.35%/°C				
Temperature coefficient ( $I_{sc}$ )	+0.045%/°C				
Temperature coefficient ( $V_{oc}$ )	- 0.27%/°C				
Nominal module operating temperature (NMOT)	41±2°C				
Maximum system voltage (IEC/UL)	1500V <sub>DC</sub>				
Number of diodes	3				
Junction box IP rating	IP 68				
Maximum series fuse rating	25 A				

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)	2256 x 1133 x 35 mm
Frame technology	Aluminum, silver anodized
Front glass thickness	3.2 mm
Cable length (IEC/UL)	Portrait: 300 mm Landscape: 1400 mm
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 4 (UL)
Connector type (IEC/UL)	HCB40 / MC4-EVO2

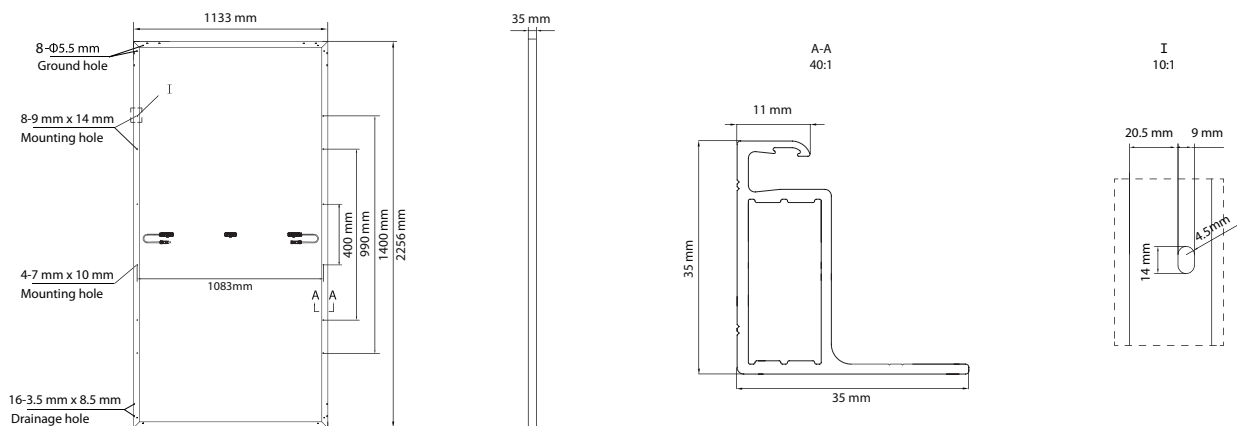
① Refer to Astronergy crystalline installation manual or contact technical department.  
 Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

## PACKING SPECIFICATIONS

① Module Weight	27.2 kg
② Packing unit	31 pcs / box
Weight of packing unit (for 40'HQ container)	882 kg
Number of modules per 40'HQ container	620 pcs

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

## MODULE DIMENSION DETAILS



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