

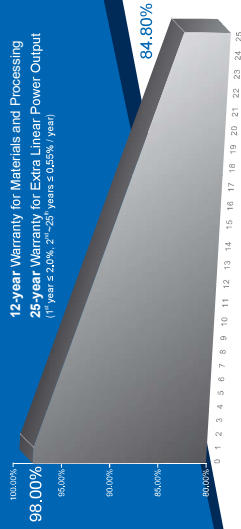
ASTRO 4 semi

Create Sustainable and Efficient Green Energy

440W~455W Monocrystalline PV Module CHSM72M-HC Series (166)



12-year Warranty for Materials and Processing
25-year Warranty for Extra Linear Power Output
(1st year ≤ 2.0%, 2nd-25th years ≤ 0.65%/year)



KEY FEATURES



OUTPUT POSITIVE TOLERANCE
Guaranteed 0~+5W positive tolerance to ensure power output.



INNOVATIONAL HALF-CUT TECHNOLOGY
Better shading tolerance, higher reliability.



INNOVATIONAL MULTI-BUSBAR TECHNOLOGY
Higher light absorption, lower risk of microcrack.



SUPER PERC+ CELL TECHNOLOGY
Higher module power and module efficiency, lower power degradation.



PID RESISTANCE
Excellent PID resistance.

COMPREHENSIVE CERTIFICATES



The first solar company which passed the TUV Nord IEC61215 62341 certification audit.

For Global Market

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ASTRONERGY
A CHNT COMPANY

ELECTRICAL SPECIFICATIONS

STC rated output (P _{mp})	440 Wp	445 Wp	450 Wp	455 Wp
Rated voltage (V _{mp}) at STC	40.85 V	41.05 V	41.32 V	41.51 V
Rated current (I _{mp}) 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 _{mp}) at NMOT	327.1 Wp	330.8 Wp	334.5 Wp	338.2 Wp
Rated voltage (V _{mp}) at NMOT	37.93 V	38.12 V	38.37 V	38.55 V
Rated current (I _{mp}) at NMOT	8.62 A	8.69 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 _{mp})	-0.35%/°C			
Temperature coefficient (I _{sc})	+0.035%/°C			
Temperature coefficient (V _{oc})	-0.28%/°C			
Nominal module operating temperature (NMOT)	41±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			

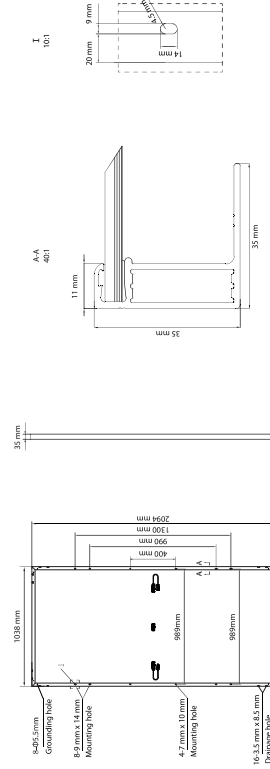
STC: Irradiance 1000W/m², Cell Temperature 25°C, AM1.5
NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM1.5, Wind Speed 1m/s

MECHANICAL SPECIFICATIONS

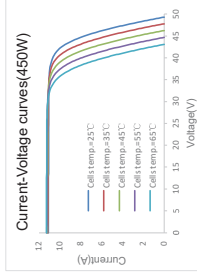
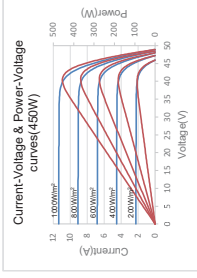
Outer dimensions (L x W x H)	2094 x 1038 x 35 mm
Frame technology	Aluminum, silver anodized
Front glass thickness	3.2 mm
Cable length (IEC/UL)	Portrait: 300 mm Landscape: 1300 mm
Cable diameter (IEC/UL)	4 mm ² / 12 AWG
Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Fire performance (IEC/UL)	Class C (IEC) or Type 4 (UL)
Connector type (IEC/UL)	HCB40 / MC4-EV02

Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load: 1.5xMaximum Mechanical Design Load.

MODULE DIMENSION DETAILS



CURVE



PACKING SPECIFICATIONS

Module Weight	23.5 kg
Packing unit	31 pcs / box
Weight of packing unit (for 40 HQ container)	772 kg
Number of modules per 40HQ container	682 pcs

¹ Tolerance: ±1.0kg
² Subject to sales contract

Astronergy 01-2021

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