



**ASTRONERGY**  
A CHNT COMPANY

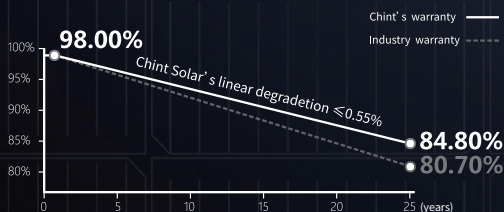
# ASTRO 4 Semi

Create Sustainable and Efficient Green Energy

CHSM60M-HC  
CHSM60M/LV-HC  
Monofacial Series (166)

## 370~380W

PERC+ / Multi-busbar / Half-cut



12-year Product Warranty (Standard)

15-year Product Warranty (Optional, special for rooftop market)

25-year Linear Power Warranty



ISO 9001:2015:ISO Quality Management System  
ISO 14001:2015:ISO Environment Management System  
ISO 45001:Occupational Health and Safety  
The first solar company which passed the Nord IEC/TS 62941 certification audit.



**Tier 1**  
BloombergNEF



370~380W

POWER RANGE

0~+5W

POWER  
TOLERANCE

21.1%

MAX MODULE  
EFFICIENCY

≤ 2.0%

FIRST YEAR  
POWER DEGRADATION

≤ 0.55%

YEAR 2-25  
POWER DEGRADATION

## Electrical Specifications

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

Rated output (P <sub>mpp</sub> / Wp)	370	375	380
Rated voltage (V <sub>mpp</sub> / V)	33.98	34.28	34.51
Rated current (I <sub>mpp</sub> / A)	10.89	10.94	11.01
Open circuit voltage (V <sub>oc</sub> / V)	40.75	41.05	41.34
Short circuit current (I <sub>sc</sub> / A)	11.35	11.42	11.49
Module efficiency	20.3%	20.6%	20.9%

**NMOT:** Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20° C, AM=1.5, Wind Speed 1m/s

Rated output (P <sub>mpp</sub> / Wp)	275.9	279.6	283.4
Rated voltage (V <sub>mpp</sub> / V)	31.68	31.96	32.18
Rated current (I <sub>mpp</sub> / A)	8.71	8.75	8.81
Open circuit voltage (V <sub>oc</sub> / V)	38.31	38.59	38.87
Short circuit current (I <sub>sc</sub> / A)	9.13	9.19	9.24

Power Sorting: 0~+5W

Measurement tolerance +/- 3%

## Temperature Ratings (STC)

Temperature coefficient (P <sub>mpp</sub> )	-0.35%/°C	No. of diodes	3
Temperature coefficient (I <sub>sc</sub> )	+0.050%/°C	Junction box IP rating	IP 68
Temperature coefficient (V <sub>oc</sub> )	-0.27%/°C	Max. series fuse rating	20 A
Nominal module operating temperature (NMOT)	41±2°C	Max. system voltage (IEC/UL)	1500V <sub>DC</sub> 1000V <sub>DC</sub>

## Operating Parameters

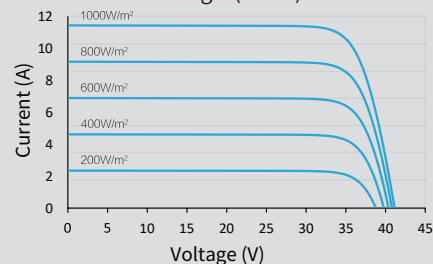
## Mechanical Specifications

Outer dimensions (L x W x H)	1755 x 1038 x 35 mm
Cell Type	P type Mono-crystalline
No. of cells	120 (6*20)
Frame technology	Aluminum, silver or black anodized
Front glass thickness	3.2 mm
Cable length (IEC/UL)	Portrait: 300 mm; Landscape: 1200 mm
Cable diameter (IEC/UL)	4 mm <sup>2</sup> / 12 AWG
① Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	PV-HCB40 or PV-KST4/xy-UR,PV-KBT4/xy-UR,PV-KST4-EVO2/xy-UR,PV-KBT4-EVO2/xy-UR(optional)
Module weight	19.4 kg (Tolerance +/- 1.0kg)
Packing unit	31 pcs / box (Subject to sales contract)
Weight of packing unit (for 40' HQ container)	630 kg
Modules per 40' HQ container	806 pcs

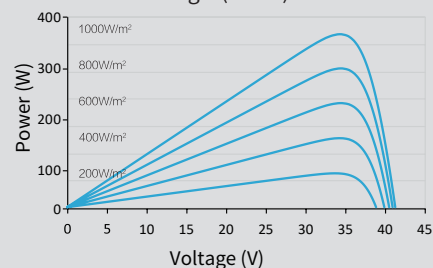
① Refer to Astronergy crystalline installation manual or contact technical department.  
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

## Curve

Current-Voltage (375W)



Power-Voltage (375W)



Current-Voltage (375W)

