



**ASTRONERGY**  
A CHINT COMPANY

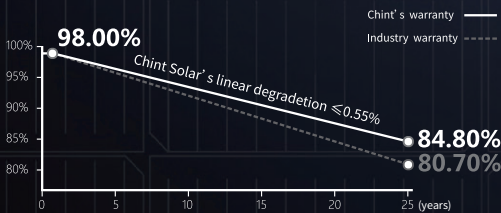
# ASTRO 4 Semi

Create Sustainable and Efficient Green Energy

CHSM60M-HC  
Monofacial Series (166)

## 370~385W

PERC+ / Multi-busbar / Half-cut  
PID resistance



- 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



**370~385W**

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

	370	375	380	385
Rated output (P <sub>mpp</sub> / W <sub>p</sub> )	370	375	380	385
Rated voltage (V <sub>mpp</sub> / V)	33.98	34.28	34.51	34.74
Rated current (I <sub>mpp</sub> / A)	10.89	10.94	11.01	11.07
Open circuit voltage (V <sub>oc</sub> / V)	40.75	41.05	41.34	41.62
Short circuit current (I <sub>sc</sub> / A)	11.35	11.42	11.49	11.55
Module efficiency	20.3%	20.6%	20.9%	21.1%

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

	275.9	279.6	283.4	287.1
Rated output (P <sub>mpp</sub> / W <sub>p</sub> )	275.9	279.6	283.4	287.1
Rated voltage (V <sub>mpp</sub> / V)	31.68	31.96	32.18	32.43
Rated current (I <sub>mpp</sub> / A)	8.71	8.75	8.81	8.85
Open circuit voltage (V <sub>oc</sub> / V)	38.31	38.59	38.87	39.13
Short circuit current (I <sub>sc</sub> / A)	9.13	9.19	9.24	9.29

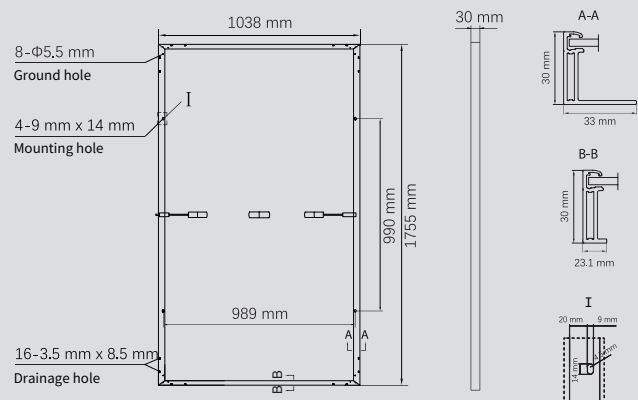
## Temperature Ratings (STC)

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>

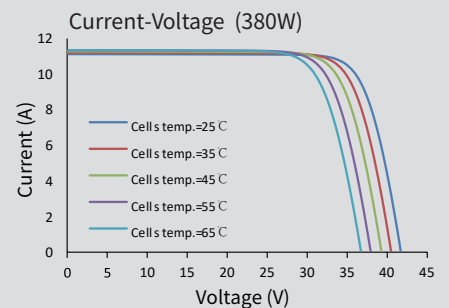
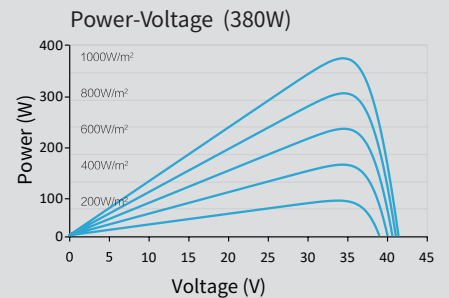
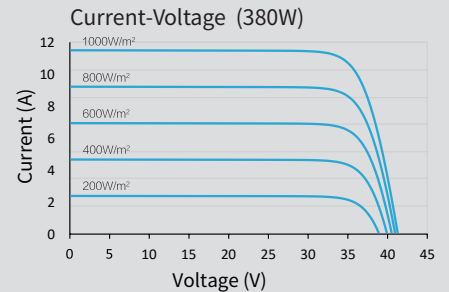
## Operating Parameters

## Mechanical Specifications

Outer dimensions (L x W x H)	1755 x 1038 x 30 mm
Cell Type	P type Mono-crystalline
No. of cells	120 (6*20)
Frame technology	Aluminum, silver 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)	HCB40 / MC4-EVO2 (optional)
Module weight	19.1 kg
Packing unit	36 pcs / box (Subject to sales contract)
Weight of packing unit (for 40' HQ container)	717 kg
Modules per 40' HQ container	936 pcs



## Curve



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