



**ASTRONERGY**  
A CHINT COMPANY

# 395W~410W

Monocrystalline PV Module  
CHSM54M-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.



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



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

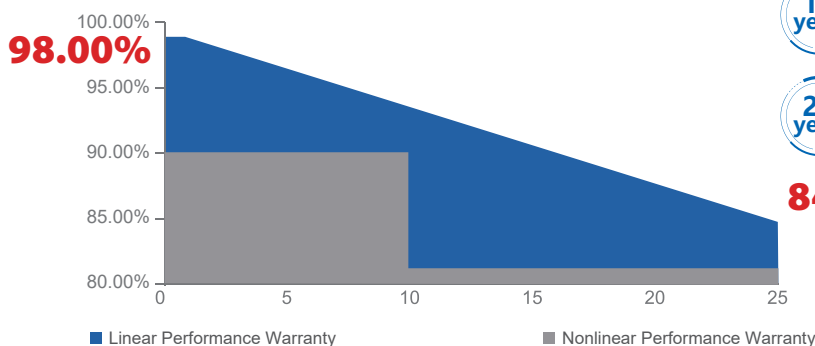


**SUPER PERC+ CELL TECHNOLOGY**  
Higher module power and module efficiency, lower power degradation.



**Anti PID**  
**PID RESISTANCE**  
Excellent PID resistance.

## WARRANTY



**12 years**

Warranty for Materials and Processing (Standard)

**15 years**

Warranty for Materials and Processing (Optional, special for rooftop market)

**25 years**

Warranty for Extra Linear Power Output (1<sup>st</sup> year ≤ 2.0%, 2<sup>nd</sup>~25<sup>th</sup> years ≤ 0.55% / year)

**84.80%**

Preliminary  
For Global Market



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

## ELECTRICAL SPECIFICATIONS

|   |                     |          |                     |          |
|---|---------------------|----------|---------------------|----------|
| STC rated output ( $P_{mpp}$ )              | 395 Wp              | 400 Wp   | 405 Wp              | 410 Wp   |
| Rated voltage ( $V_{mpp}$ ) at STC          | 30.92 V             | 31.09 V  | 31.26 V             | 31.43 V  |
| Rated current ( $I_{mpp}$ ) at STC          | 12.77 A             | 12.86 A  | 12.96 A             | 13.05 A  |
| Open circuit voltage ( $V_{oc}$ ) at STC    | 36.80 V             | 37.00 V  | 37.20 V             | 37.40 V  |
| Short circuit current ( $I_{sc}$ ) at STC   | 13.52 A             | 13.65 A  | 13.76 A <td 13.88 A |          |
| Module efficiency                           | 20.2%               | 20.5%    | 20.7%               | 21.0%    |
| Rated output ( $P_{mpp}$ ) at NMOT          | 295.2 Wp            | 298.9 Wp | 302.7 Wp            | 306.4 Wp |
| Rated voltage ( $V_{mpp}$ ) at NMOT         | 28.82 V             | 28.98 V  | 29.13 V             | 29.29 V  |
| Rated current ( $I_{mpp}$ ) at NMOT         | 10.24 A             | 10.32 A  | 10.39 A             | 10.46 A  |
| Open circuit voltage ( $V_{oc}$ ) at NMOT   | 34.78 V             | 34.97 V  | 35.15 V             | 35.34 V  |
| Short circuit current ( $I_{sc}$ ) at NMOT  | 10.97 A             | 11.07 A  | 11.17 A             | 11.26 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

## MECHANICAL SPECIFICATIONS

|                                |  |
|--------------------------------|--|
| Outer dimensions (L x W x H)   | 1722 x 1134 x 30 mm                    |
| Frame technology               | Aluminum, black anodized               |
| Front glass thickness          | 3.2 mm                                 |
| Cable length (IEC/UL)          | Portrait: 300 mm<br>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)       |
| Fire performance (IEC/UL)      | Class C (IEC) or Type 4 (UL)           |
| Connector type (IEC/UL)        | HCB40 / MC4-EVO2 (optional)            |

① Refer to Astronergy crystalline installation manual or contact technical department.

Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

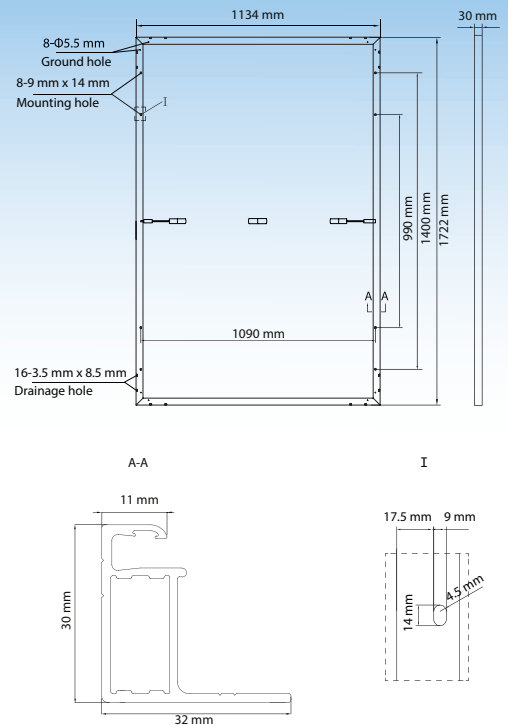
## PACKING SPECIFICATIONS

|  |              |
|--|--------------|
| ① Module Weight                              | 21.5 kg      |
| ② Packing unit                               | 36 pcs / box |
| Weight of packing unit (for 40'HQ container) | 813 kg       |
| Number of modules per 40'HQ container        | 936 pcs      |

① Tolerance +/- 1.0kg

② Subject to sales contract

## MODULE DIMENSION DETAILS



## CURVE

