# AstroSemi™

## Incredible Power for Small Body



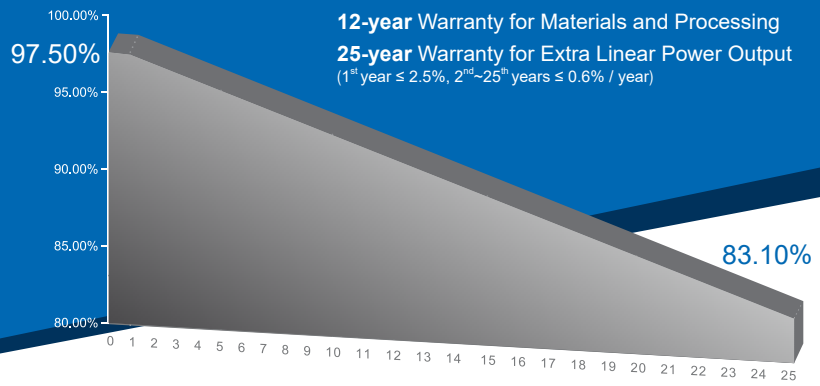
Multi-Busbar Module could be the option

# 285W~300W

## Polycrystalline PV Module

## CHSM60P-HC Series (156.75)

Tier 1 Bloomberg | No.1 PHOTON | Underwritten by International Insurer | DNV GL 2018 TOP Performance




**12-year** Warranty for Materials and Processing

**25-year** Warranty for Extra Linear Power Output

(1st year ≤ 2.5%, 2nd~25th years ≤ 0.6% / year)

## COMPREHENSIVE CERTIFICATES

**First solar company which passed the TUV Nord IEC/TS 62941 certification audit.**

## KEY FEATURES

**OUTPUT POSITIVE TOLERANCE**
Guaranteed 0~+5W positive tolerance ensures power output reliability.

**INNOVATIONAL HALF-CELL TECHNOLOGY**
Improves the module output, decreases the risk of mirco-crack, enhances the module reliability.

**INNOVATIVE PERC CELL TECHNOLOGY**
Excellent cell efficiency and output.

**REDUCE SHADOW LOSS**
Effectively reduces the effect of shadow on the module surface.

**REDUCE INTERNAL MISMATCH LOSS**
Reduces mismatch loss and improves output.

**PASSED HAIL TEST**
Certified to hail resistence: ice ball size (d=45mm) and ice ball velocity (v=30.7m/s).

**PID RESISTANCE**
Excellent PID resistance at 96 hours (@85℃ /85%) test, and also can be improved to meet higher standards for the particularly harsh environment.

ASTRONERGY
A CHINT COMPANY

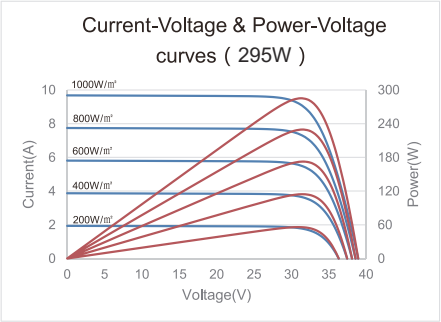
For Global Market

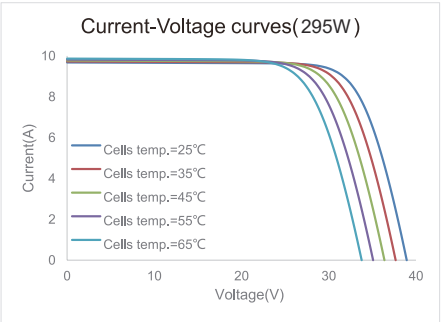
## ELECTRICAL SPECIFICATIONS

| | | | | |
|---|---|---|---|---|
| STC rated output ($P_{mpp}$)* | 285 Wp | 290 Wp | 295 Wp | 300 Wp |
| Rated voltage ($V_{mpp}$) at STC | 32.12 V | 32.34 V | 32.56 V | 32.78 V |
| Rated current ($I_{mpp}$) at STC | 8.87 A | 8.97 A | 9.06 A | 9.16 A |
| Open circuit voltage ($V_{oc}$) at STC | 38.65 V | 38.90 V | 39.14 V | 39.39 V |
| Short circuit current ($I_{sc}$) at STC | 9.34 A | 9.43 A | 9.52 A | 9.60 A |
| Module efficiency | 17.2% | 17.5% | 17.8% | 18.1% |
| Rated output ($P_{mpp}$) at NMOT | 212.3 Wp | 216.0 Wp | 219.7 Wp | 223.5 Wp |
| Rated voltage ($V_{mpp}$) at NMOT | 29.83 V | 30.02 V | 30.23 V | 30.41 V |
| Rated current ($I_{mpp}$) at NMOT | 7.12 A | 7.20 A | 7.27 A | 7.35 A |
| Open circuit voltage ($V_{oc}$) at NMOT | 36.21 V | 36.45 V | 36.67 V | 36.90 V |
| Short circuit current ($I_{sc}$) at NMOT | 7.54 A | 7.61 A | 7.69 A | 7.75 A |
| Temperature coefficient ($P_{mpp}$) | - 0.3550%/°C | | | |
| Temperature coefficient ($I_{sc}$) | +0.0415%/°C | | | |
| Temperature coefficient ($V_{oc}$) | - 0.2729%/°C | | | |
| Nominal module operating temperature (NMOT) | 44 ±2°C | | | |
| Maximum system voltage (IEC/UL) | 1500$V_{DC}$ | | | |
| Number of diodes | 3 | | | |
| Junction box IP rating | IP 67 | | | |
| Maximum series fuse rating | 15 A | | | |

STC: Irradiance 1000W/$m^2$, Cell Temperature 25°C, AM=1.5
NMOT: Irradiance 800W/$m^2$, Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s

## CURVE




## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Outer dimensions (L x W x H) | 1675 x 992 x 35 mm<br>65.94 x 39.06 x 1.38 in |
| Frame technology | Aluminum, silver anodized |
| Module composition | Glass / EVA / Backsheet (white) |
| Front glass thickness | 3.2 mm / 0.13 in |
| Cable length (IEC/UL) | Portrait: 350 mm (13.78 in)<br>Landscape: 1000 mm (39.37 in) |
| Cable diameter (IEC/UL) | 4 mm² / 12 AWG |
| ① Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Fire performance (IEC/UL) | Class C (IEC) or Type 1 (UL) |
| Connector type (IEC/UL) | MC4 compatible |

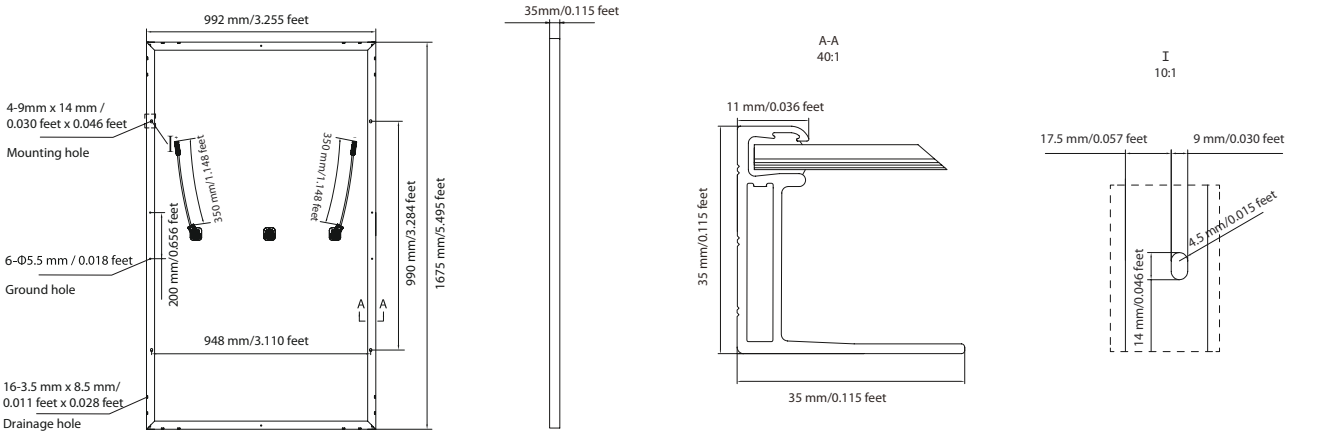
① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

## PACKING SPECIFICATIONS

| | |
|---|---|
| ① Weight (module only) | 18.7 kg / 41.23 lbs |
| ② Packing unit | 31 pcs / box |
| Weight of packing unit (for 40'HQ container) | 619 kg / 1365 lbs |
| Number of modules per 40'HQ container | 806 pcs |

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

## MODULE DIMENSION DETAILS




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