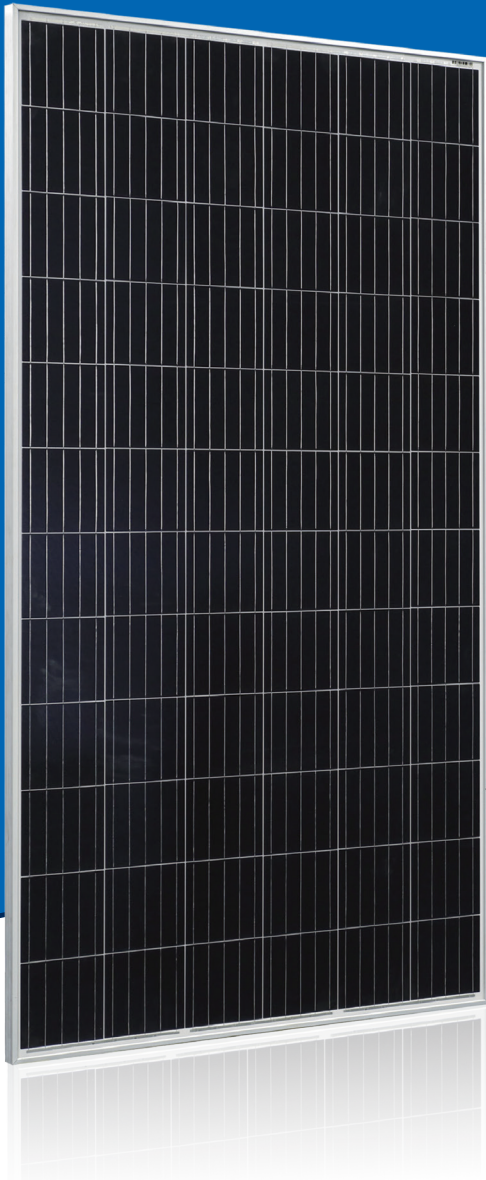


# AstroNova™

Profitable for Decades



## 310W~330W

5BB-Polycrystalline PV Module

CHSM6612P Series

CHSM6612P/HV Series

CHSM6612P max system voltage 1000V standard

CHSM6612P/HV max system voltage 1500V standard

**Tier 1**

Bloomberg

**No.1**

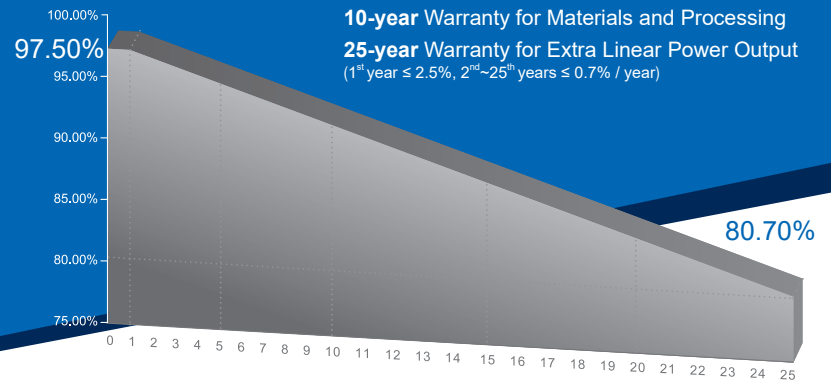
PHOTON

**MunichRe**

Insured

**DNV GL**

2018 TOP Performance



### KEY FEATURES



#### OUTPUT POSITIVE TOLERANCE

Guaranteed 0~+5W positive tolerance ensures power output reliability.



#### INNOVATIONAL 5-BUSBAR CELLS

Reduces the cell series resistance and internal stress, decreases the risk of micro-crack and improves the module output.



#### PID RESISTANCE

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



#### EXCELLENT MECHANICAL LOAD CAPABILITY

Certified to withstand: snow load (6000 Pa) and wind load (3600 Pa).



#### HIGHER RELIABILITY AND DURABILITY

Effectively deals with harsh environments, such as sand, salt mist and ammonia resistance.



#### PASSED HAIL TEST

Certified to hail resistance: ice ball size (d=45mm) and ice ball velocity (v=30.7m/s).



#### EXCELLENT LOW-LIGHT PERFORMANCE

With the deep textured ARC glass and cell surface texturing process, achieve the excellent performance at the haze, cloudy days and other low light conditions.

### COMPREHENSIVE CERTIFICATES



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

For Global Market



**ASTRONERGY**  
A CHNT COMPANY

## ELECTRICAL SPECIFICATIONS

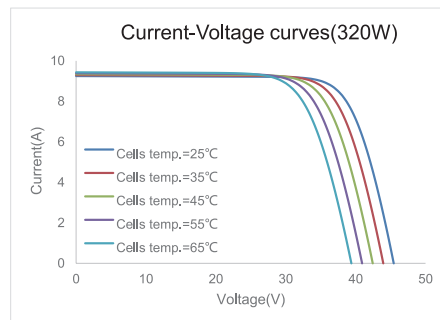
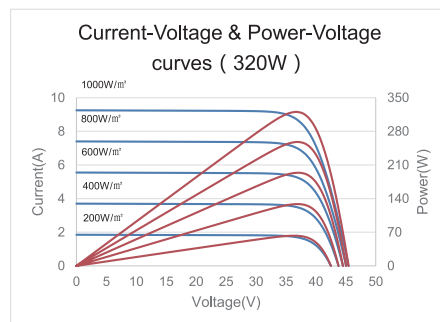
STC rated output ( $P_{mpp}$ )*	310 Wp	315 Wp	320 Wp	325 Wp	330 Wp
Rated voltage ( $V_{mpp}$ ) at STC	36.91 V	36.99 V	37.02 V	37.11 V	37.15 V
Rated current ( $I_{mpp}$ ) at STC	8.40 A	8.53 A	8.65 A	8.77 A	8.89 A
Open circuit voltage ( $V_{oc}$ ) at STC	45.15 V	45.30 V	45.45 V	45.67 V	45.86 V
Short circuit current ( $I_{sc}$ ) at STC	8.92 A	9.04 A	9.25 A	9.48 A	9.52 A
Module efficiency	16.0%	16.3%	16.5%	16.8%	17.1%
Rated output ( $P_{mpp}$ ) at NOCT	216.5 Wp	220.0 Wp	223.5 Wp	226.9 Wp	230.4 Wp
Rated voltage ( $V_{mpp}$ ) at NOCT	33.71 V	33.74 V	33.80 V	33.86 V	33.92 V
Rated current ( $I_{mpp}$ ) at NOCT	6.42 A	6.52 A	6.61 A	6.70 A	6.79 A
Open circuit voltage ( $V_{oc}$ ) at NOCT	41.43 V	41.57 V	41.70 V	41.91 V	42.08 V
Short circuit current ( $I_{sc}$ ) at NOCT	6.90 A	6.99 A	7.15 A	7.33 A	7.37 A
Temperature coefficient ( $P_{mpp}$ )	- 0.408%/°C				
Temperature coefficient ( $I_{sc}$ )	+0.050%/°C				
Temperature coefficient ( $V_{oc}$ )	- 0.311%/°C				
Normal operating cell temperature (NOCT)	46±2°C				
Maximum system voltage (IEC/UL)	1000V <sub>DC</sub> or 1500V <sub>DC</sub>				
Number of diodes	3				
Junction box IP rating	IP 67				
Maximum series fuse rating	15 A				

\* Measurement tolerance +/- 3%

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

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

## CURVE



## MECHANICAL SPECIFICATIONS

Outer dimensions (L x W x H)	1954 x 990 x 40 mm 76.93 x 38.98 x 1.57 in
Frame technology	Aluminum, silver anodized
Module composition	Glass / EVA / Backsheet (white)
Front glass thickness	3.2 mm / 0.13 in
① Cable length (IEC/UL)	1150 mm / 45.28 in
Cable diameter (IEC/UL)	4 mm <sup>2</sup> / 12 AWG
② Maximum mechanical test load	6000 Pa
Fire performance (IEC/UL)	Class C (IEC) or Type 1 (UL)
Connector type (IEC/UL)	MC4 compatible

① Option: 900(+)/600(-) mm for defined projects in advance.

② Refer to Astronergy Crystalline Silicon PV Module Installation Manual or contact technical department.  
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

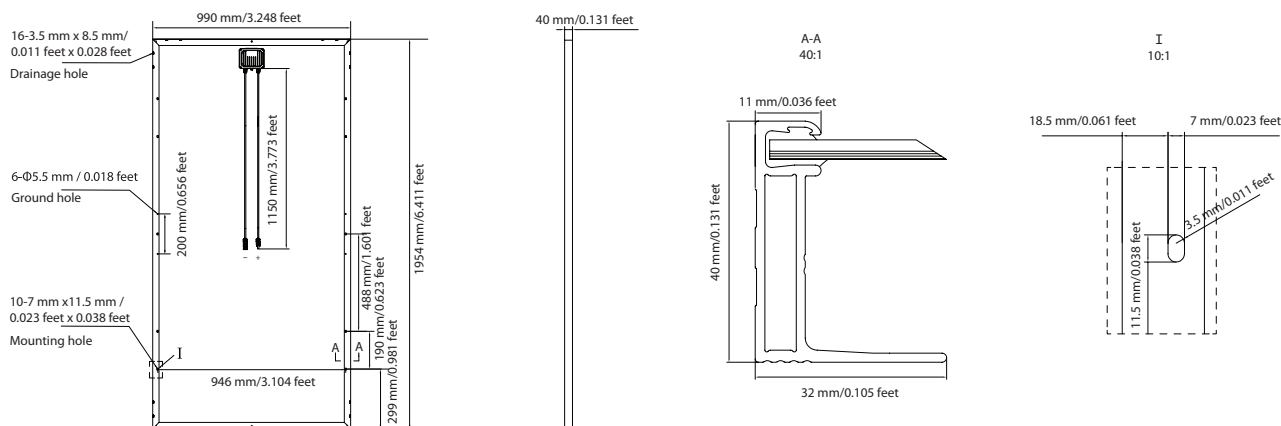
## PACKING SPECIFICATIONS

① Weight (module only)	21.8 kg / 48.06 lbs
② Packing unit	27 pcs / box
Weight of packing unit (for 40'HQ container)	634 kg / 1398 lbs
Number of modules per 40'HQ container	648 pcs

① Tolerance +/- 1.0kg

② Subject to sales contract

## MODULE DIMENSION DETAILS



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