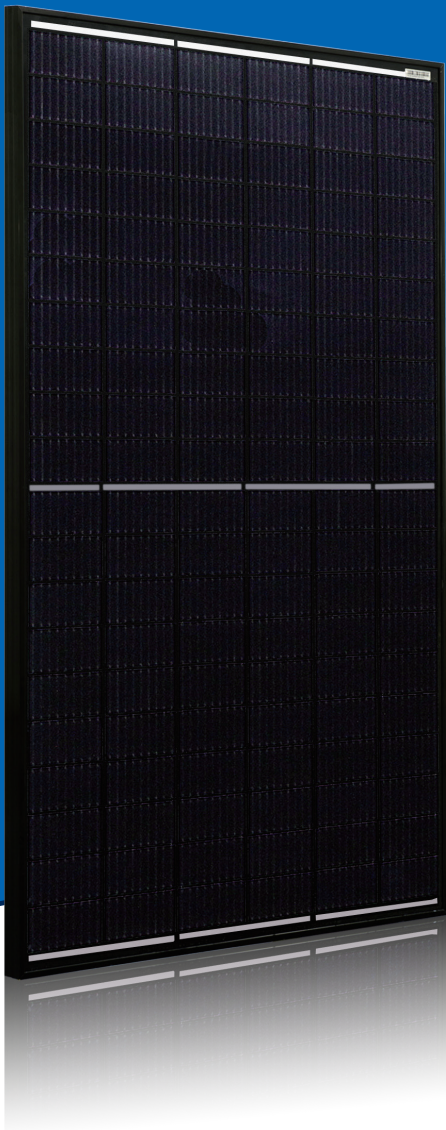


AstroSemi™

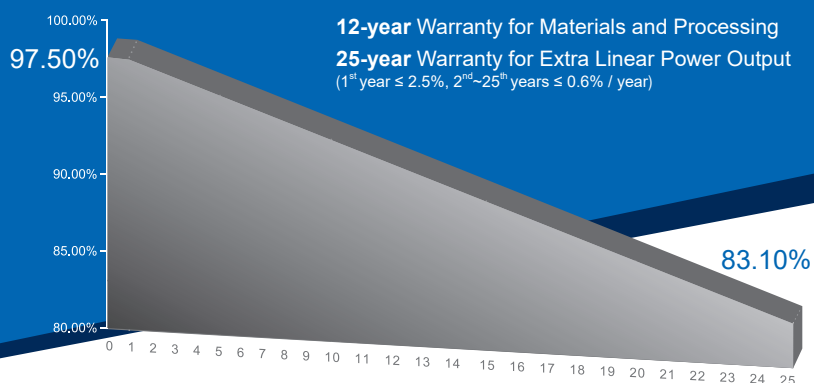
Incredible Power for Small Body



320W~330W

Monocrystalline PV Module

CHSM60M(BL)-HC Series (158.75)



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 micro-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.
- THE-STATE-OF-THE-ART APPEARANCE**
 Full black designed for a better aesthetic appearance and building integration.
- Anti 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.

For Global Market



ASTRONERGY
 A CHNT COMPANY

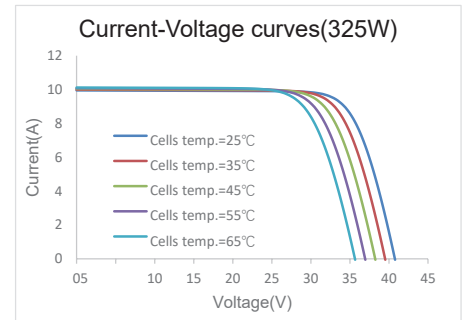
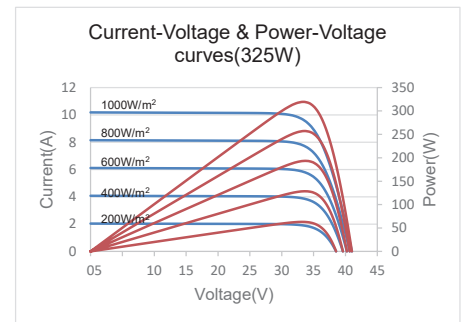
ELECTRICAL SPECIFICATIONS

STC rated output (P_{mpp})*	320 Wp	325 Wp	330 Wp
Rated voltage (V_{mpp}) at STC	33.68 V	33.93 V	34.17 V
Rated current (I_{mpp}) at STC	9.50 A	9.58 A	9.66 A
Open circuit voltage (V_{oc}) at STC	40.72 V	41.03 V	41.32 V
Short circuit current (I_{sc}) at STC	9.98 A	10.06 A	10.14 A
Module efficiency	18.9%	19.2%	19.5%
Rated output (P_{mpp}) at NMOT	238.6 Wp	242.4 Wp	246.1 Wp
Rated voltage (V_{mpp}) at NMOT	31.39 V	31.63 V	31.85 V
Rated current (I_{mpp}) at NMOT	7.60 A	7.66 A	7.73 A
Open circuit voltage (V_{oc}) at NMOT	38.28 V	38.57 V	38.85 V
Short circuit current (I_{sc}) at NMOT	8.03 A	8.09 A	8.16 A
Temperature coefficient (P_{mpp})	- 0.3438%/°C		
Temperature coefficient (I_{sc})	+0.0353%/°C		
Temperature coefficient (V_{oc})	- 0.2722%/°C		
Nominal module operating temperature (NMOT)	44±2°C		
Maximum system voltage (IEC/UL)	1000V _{DC}		
Number of diodes	3		
Junction box IP rating	IP 67		
Maximum series fuse rating	20 A		

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s

CURVE



MECHANICAL SPECIFICATIONS

Outer dimensions (L x W x H)	1692 x 1002 x 35 mm 66.61 x 39.45 x 1.38 in
Frame technology	Aluminum, black anodized
Module composition	Glass / EVA / Backsheet (black)
Front glass thickness	3.2 mm / 0.13 in
Cable length (IEC/UL)	Portrait: 350 mm (13.78 in) Landscape: 1100 mm (43.31 in)
Cable diameter (IEC/UL)	4 mm ² / 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

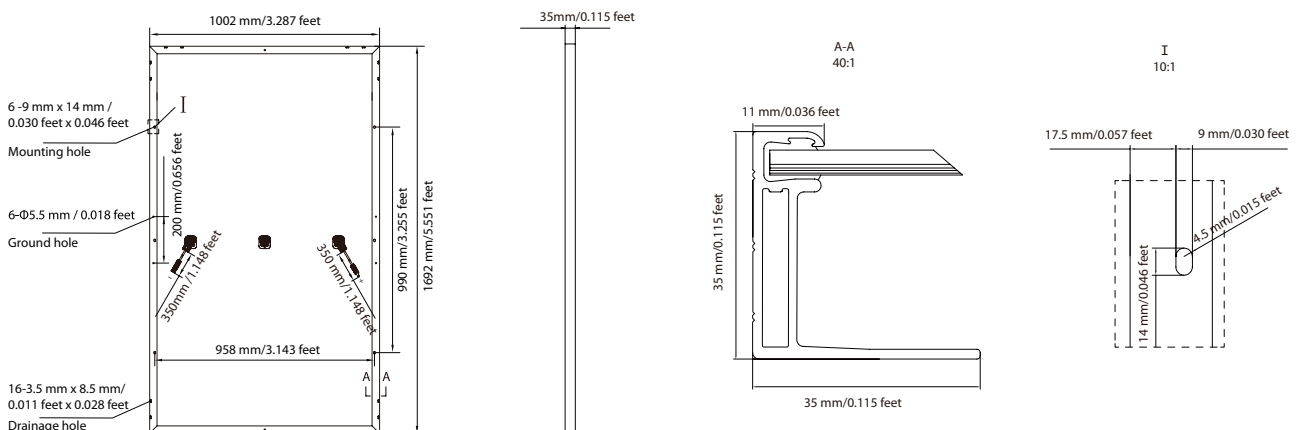
① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

PACKING SPECIFICATIONS

① Weight (module only)	19.1 kg / 42.11 lbs
② Packing unit	31 pcs / box
Weight of packing unit (for 40'HQ container)	631 kg / 139 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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