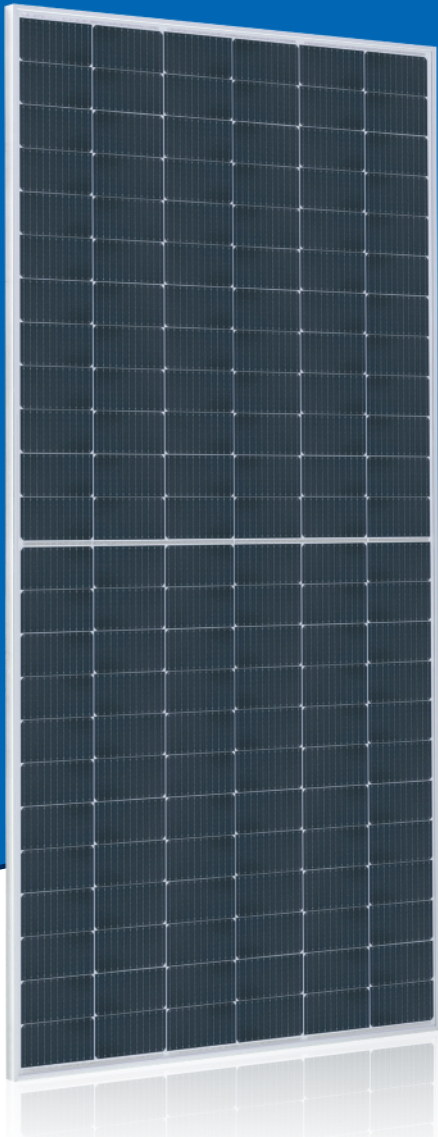


# ASTRO 5 Twins

Create Sustainable and Efficient Green Energy

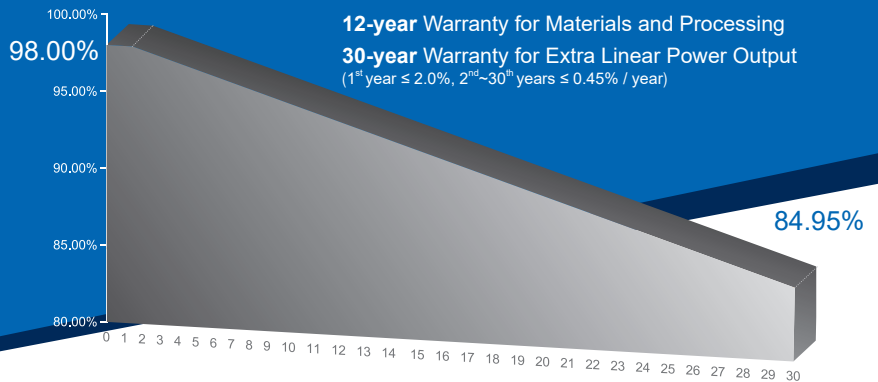


## 520W~545W

### Monocrystalline PV Module

### CHSM72M(DG)/F-BH Series (182)

CHSM72M(DG)/F-BH is bifacial module with white glazed glass



#### KEY FEATURES



#### 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.



#### BIFACIAL DESIGN , HIGHER CUSTOMER VALUE

Up to 25% additional power gain , lower BOS cost and LCOE.



#### INNOVATIONAL HALF-CUT&MULTI-BUSBAR TECHNOLOGY

Lower risk of microcrack, better shading tolerance, higher reliability.



#### SUPER PERC+ CELL TECHNOLOGY

Higher module power and module efficiency, lower power degradation.



#### APPLICABLE FOR MULTI DIFFERENT ENVIRONMENTS

Wide range of applications, such as snow areas, high humidity areas and strong sandstorm areas, etc.

#### COMPREHENSIVE CERTIFICATES



Designed for the Australian Market



**ASTRONERGY**  
A CHNT COMPANY

## ELECTRICAL SPECIFICATIONS

Power rating (front)	520 Wp		525 Wp		530 Wp		535 Wp		540 Wp		545 Wp	
Testing Condition	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
STC rated output ( $P_{mpp}/Wp$ )	520	364	525	368	530	371	535	375	540	378	545	382
Rated voltage ( $V_{mpp}/V$ ) at STC	41.26	41.31	41.43	41.48	41.60	41.65	41.76	41.81	41.93	41.98	42.10	42.15
Rated current ( $I_{mpp}/A$ ) at STC	12.60	8.82	12.67	8.87	12.74	8.92	12.81	8.97	12.88	9.01	12.95	9.06
Open circuit voltage ( $V_{oc}/V$ ) at STC	49.10	49.05	49.30	49.25	49.50	49.45	49.70	49.65	49.90	49.85	50.10	50.05
Short circuit current ( $I_{sc}/A$ ) at STC	13.32	9.21	13.40	9.27	13.48	9.33	13.57	9.39	13.66	9.45	13.75	9.52
Module efficiency	20.3%	14.2%	20.5%	14.4%	20.7%	14.5%	20.9%	14.7%	21.1%	14.8%	21.3%	14.9%
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	30 A											

\* Measurement tolerance +/- 3%  
STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## ELECTRICAL SPECIFICATIONS (Integrated power)

$P_{mpp}$ gain	$P_{mpp}$	$V_{mpp}$	$I_{mpp}$	$V_{oc}$	$I_{sc}$
5%	557 Wp	41.60 V	13.38 A	49.50 V	14.16 A
10%	583 Wp	41.60 V	14.02 A	49.50 V	14.83 A
15%	610 Wp	41.61 V	14.65 A	49.51 V	15.50 A
20%	636 Wp	41.61 V	15.29 A	49.51 V	16.18 A
25%	663 Wp	41.61 V	15.92 A	49.52 V	16.85 A

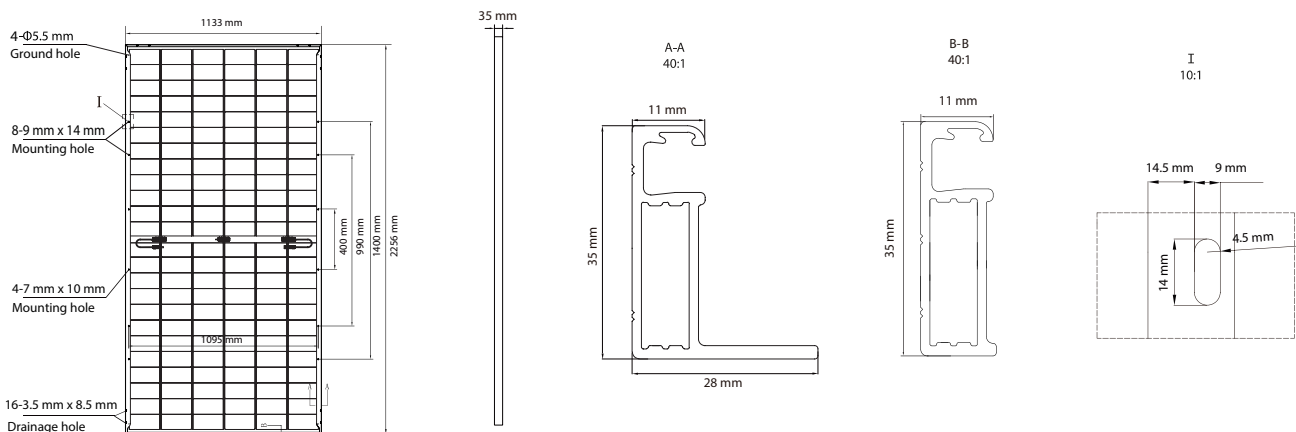
\* Measurement tolerance +/- 3%  
Electrical characteristics with different rear power gain (reference to 530W)

## MECHANICAL SPECIFICATIONS

Outer dimensions (L x W x H)	2256 x 1133 x 35 mm
Frame technology	Aluminum, silver anodized
Glass thickness	2.0 mm
Cable length (IEC/UL)	Portrait: 300 mm Landscape: 1400 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 A (IEC) or Type 29 (UL)
Connector type (IEC/UL)	HCB40 / MC4-EVO2

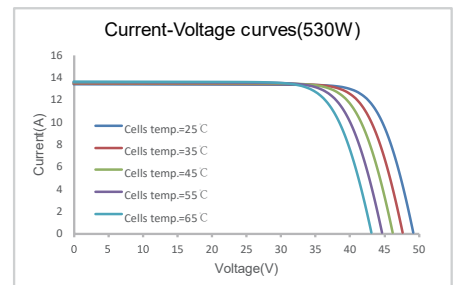
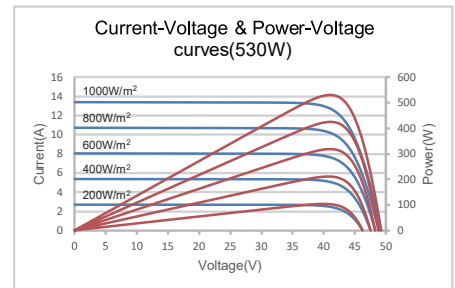
① Refer to Astronergy crystalline installation manual or contact technical department.  
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

## MODULE DIMENSION DETAILS



Made in Zhejiang, Jiangsu and Anhui of China, Made in Sincan/ Ankara of Turkey  
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<http://www.astronergy.com.au>

## CURVE



## PACKING SPECIFICATIONS

① Module Weight	32.3 kg
② Packing unit	31 pcs / box
Weight of packing unit (for 40'HQ container)	1040 kg
Number of modules per 40'HQ container	620 pcs

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