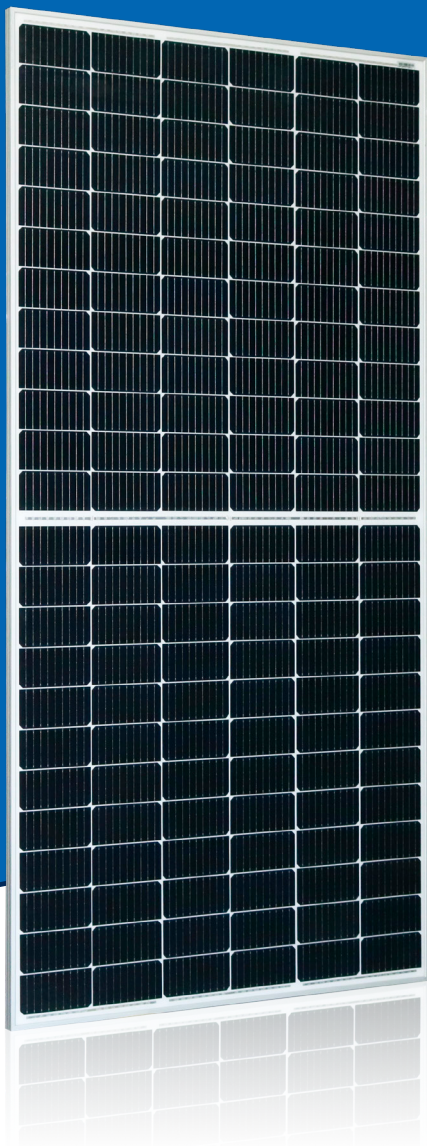


AstroTwins™

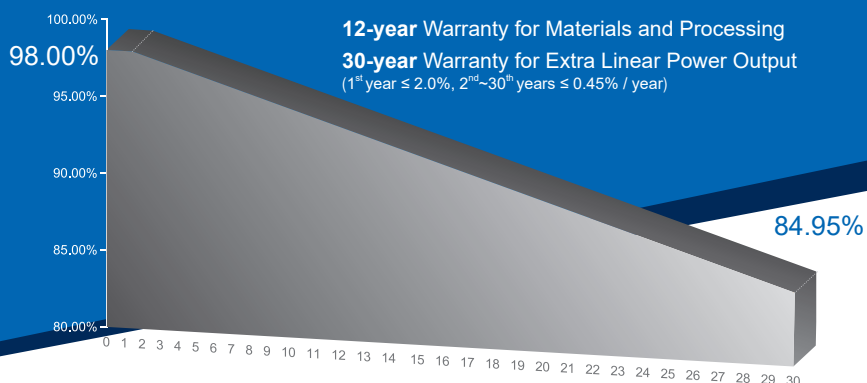
Enjoy the Energy of the Universe



435W~450W

P-type Monocrystalline PV Module
CHSM72M(DG)/F-BH Series (166)

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



KEY FEATURES

- +5W OUTPUT POSITIVE TOLERANCE**
Guaranteed 0~+5W positive tolerance ensures power output reliability.
- EXCELLENT WEATHER RESISTANCE**
Reduces the cell micro-crack and extended product warranty.
- BIFACIAL POWER**
The backside makes use of the reflected and scattered light from the surroundings, the modules can yield up to 5%~30% power more, depending on the albedo.
- REDUCE INTERNAL MISMATCH LOSS**
Reduces mismatch loss and improves output.
- APPLICABLE FOR MULTI DIFFERENT ENVIRONMENTS**
The wide range of applications, such as BIPV, vertical installation, snow area, high humidity area and strong sandstorm area, etc.
- SNAIL TRAIL RESISTANCE**
Reduces the probability of snail trails with zero water vapor transmittance.

COMPREHENSIVE CERTIFICATES



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

For Global Market



ASTRONERGY
A CHNT COMPANY

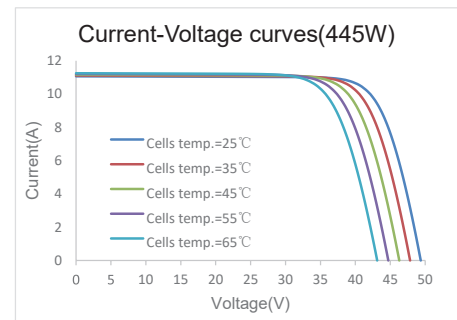
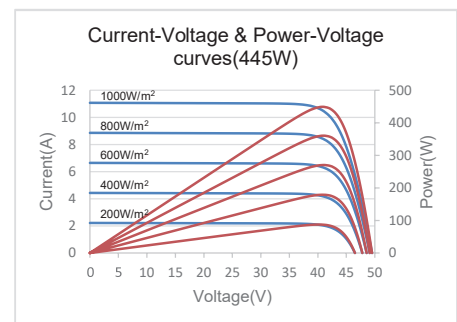
ELECTRICAL SPECIFICATIONS

Power rating (front)	435 Wp		440 Wp		445 Wp		450 Wp	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
STC rated output (P _{mpp} /Wp)*	435	323	440	327	445	331	450	335
Rated voltage (V _{mpp} /V)	40.85	37.92	41.12	38.18	41.36	38.40	41.59	38.61
Rated current (I _{mpp} /A)	10.65	8.53	10.70	8.57	10.76	8.62	10.82	8.66
Open circuit voltage (V _{oc} /V)	48.90	45.79	49.11	45.99	49.44	46.30	49.78	46.62
Short circuit current (I _{sc} /A)	11.12	8.96	11.20	9.02	11.25	9.06	11.30	9.10
Module efficiency	19.4%		19.6%		19.9%		20.1%	
Temperature coefficient (P _{mpp})	- 0.35%/°C							
Temperature coefficient (I _{sc})	+0.04%/°C							
Temperature coefficient (V _{oc})	- 0.28%/°C							
Nominal module operating temperature (NOCT)	44±2°C							
Maximum system voltage (IEC/UL)	1500V _{DC}							
Number of diodes	3							
Junction box IP rating	IP 68							
Maximum series fuse rating	20 A							

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

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

CURVE



ELECTRICAL SPECIFICATIONS (Integrated power)

P_{mpp} gain	P_{mpp}	V_{mpp}	I_{mpp}	V_{oc}	I_{sc}
5%	467 Wp	41.12 V	11.36 A	49.11 V	11.81 A
10%	489 Wp	41.12 V	11.89 A	49.11 V	12.37 A
15%	511 Wp	41.12 V	12.43 A	49.11 V	12.93 A
20%	534 Wp	41.02 V	13.02 A	49.21 V	13.48 A
25%	556 Wp	41.02 V	13.55 A	49.21 V	14.04 A

Electrical characteristics with different rear power gain (reference to 445W)

MECHANICAL SPECIFICATIONS

Outer dimensions (L x W x H)	2131 x 1052 x 30 mm
Frame technology	Aluminum, silver anodized
Glass thickness	2.0 mm
Cable length (IEC/UL)	Portrait: 350 mm Landscape: 1300 mm
Cable diameter (IEC/UL)	4 mm ² / 12 AWG
① Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	MC4 compatible

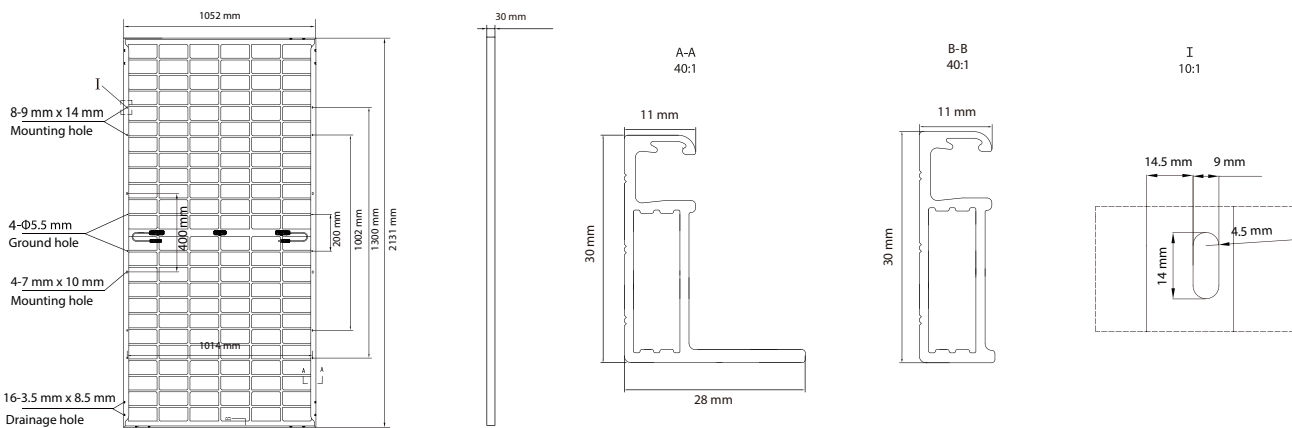
① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

PACKING SPECIFICATIONS

① Weight (module only)	28.5 kg
② Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1085 kg
Number of modules per 40'HQ container	792 pcs

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

MODULE DIMENSION DETAILS



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<http://energy.chint.com>

Astronergy 10-2020