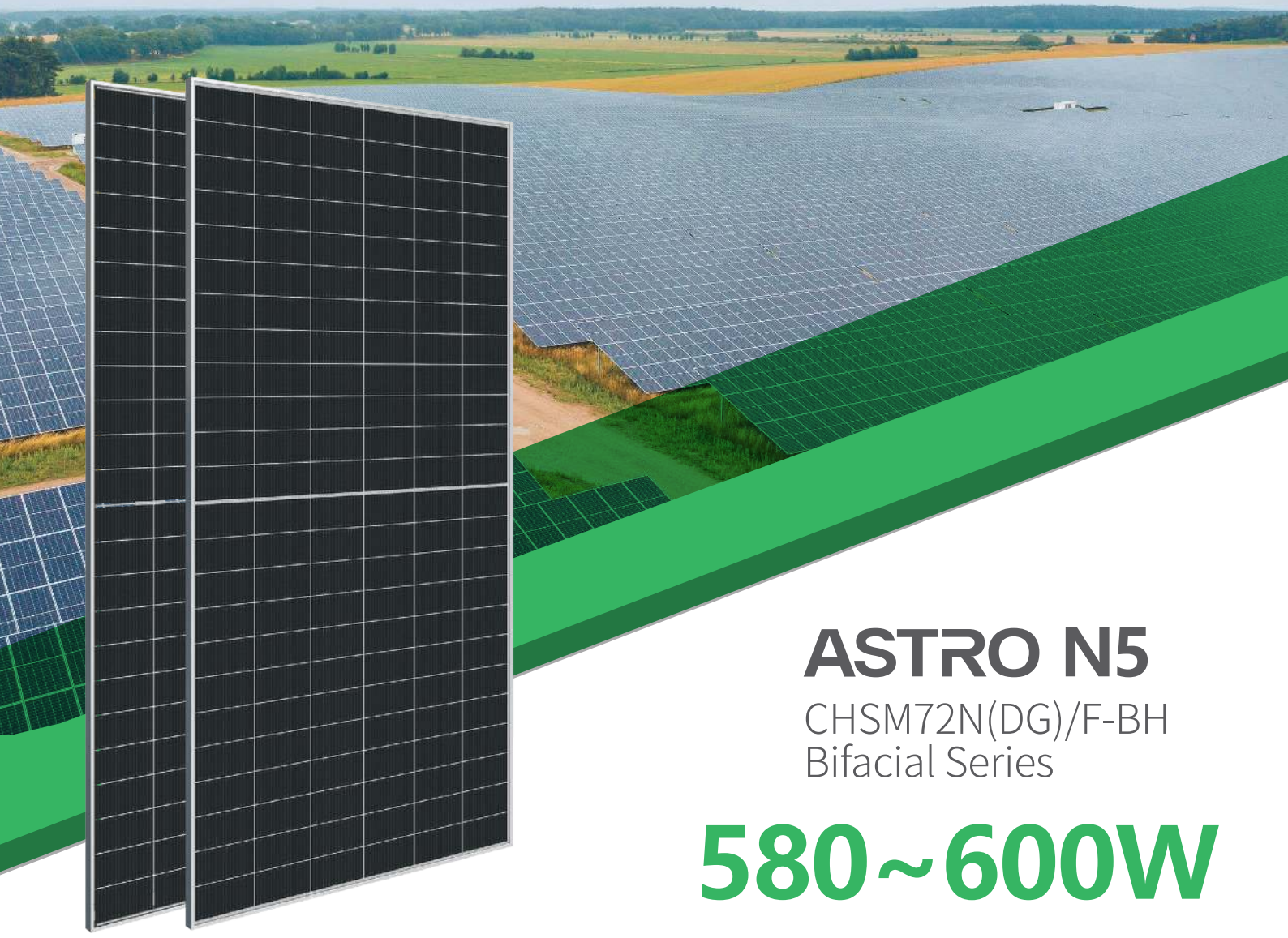
ASTRONERGY



# ASTRO N5

## CHSM72N(DG)/F-BH
## Bifacial Series

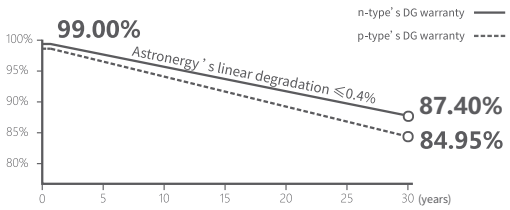
# 580~600W

Assist carbon neutrality

## Warranty

15 15-year Product Warranty

30 30-year Linear Power Warranty




### n-type TOPCon 4.0
Novel upgrade, enhancing module efficiency

### SMBB Design
Enhancing current collection, minimizing power loss

### Better Temperature Coefficient
⩽ -0.29%/°C , adapting for high temperature

### Bifacial Power Generation
Maximizing bifaciality, boosting backside power output

IEC 61215, IEC 61730
ISO 9001:2015:ISO Quality Management System
ISO 14001:2015:ISO Environment Management System
ISO 45001:Occupational Health and Safety
The first solar company which passed the Nord IEC/TS 62941 certification audit

TOP PERFORMER 2025 kiwa PV MODULE RELIABILITY SCORECARD

Tier 1 BloombergNEF

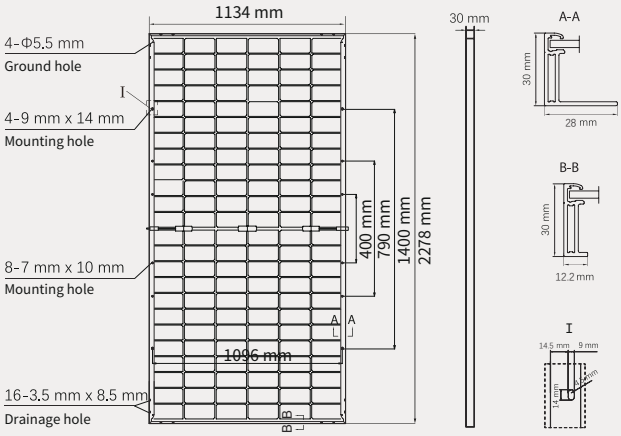
Underwritten by International Insurer

| 580~600W | 0~+3% | 23.2% | ≤ 1.0% | ≤ 0.4% |
|---|---|---|---|---|
| POWER RANGE | POWER SORTING | MAX MODULE EFFICIENCY | FIRST YEAR POWER DEGRADATION | YEAR 2-30 POWER DEGRADATION |

## Mechanical Specifications

| | |
|---|---|
| Outer dimensions (L x W x H) | 2278 x 1134 x 30 mm |
| Cell type | n-type mono-crystalline |
| No. of cells | 144 (6*24) |
| Frame technology | Aluminum, silver anodized |
| Front / Back glass | 2.0+2.0 mm |
| Cable length (Including connector) | Portrait: ( + )350 mm,( - )250 mm; Customized length |
| Cable diameter (IEC/UL) | 4 $mm^2$ / 12 AWG |
| ① Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Connector type (IEC/UL) | HCB40 (Standard) / MC4-EVO2A (Optional) |
| Module weight | 31.1 kg |
| Packing unit | 36 pcs / box |
| Weight of packing unit (for 40'HQ container) | 1171 kg |
| Modules per 40' HQ container | 720 pcs (Subject to sales contract) |

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




## Electrical Specifications

**STC:** Irradiance 1000W/$m^2$, Cell Temperature 25° C, AM=1.5

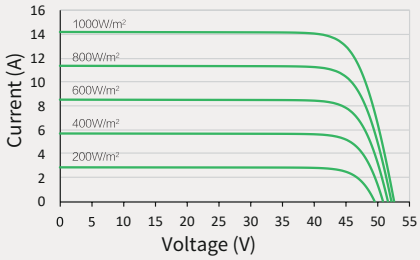
| | | | | | |
|---|---|---|---|---|---|
| Rated output (Pmpp / Wp) | 580 | 585 | 590 | 595 | 600 |
| Rated voltage (Vmpp / V) | 43.70 | 43.88 | 44.05 | 44.21 | 44.38 |
| Rated current (Impp / A) | 13.27 | 13.33 | 13.40 | 13.46 | 13.52 |
| Open circuit voltage (Voc / V) | 52.21 | 52.42 | 52.62 | 52.81 | 53.01 |
| Short circuit current (Isc / A) | 14.01 | 14.07 | 14.13 | 14.20 | 14.26 |
| Module efficiency | 22.5% | 22.6% | 22.8% | 23.0% | 23.2% |

**BNPI:** Irradiance: front 1000W/$m^2$, rear 135W/$m^2$, Cell Temperature 25° C, AM=1.5

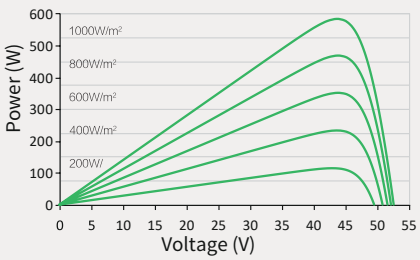
| | | | | | |
|---|---|---|---|---|---|
| Rated output (Pmpp / Wp) | 641.3 | 646.8 | 652.4 | 657.9 | 663.4 |
| Rated voltage (Vmpp / V) | 43.71 | 43.89 | 44.06 | 44.23 | 44.40 |
| Rated current (Impp / A) | 14.67 | 14.74 | 14.81 | 14.88 | 14.94 |
| Open circuit voltage (Voc / V) | 52.23 | 52.44 | 52.63 | 52.83 | 53.02 |
| Short circuit current (Isc / A) | 15.55 | 15.62 | 15.69 | 15.76 | 15.83 |

## Curve

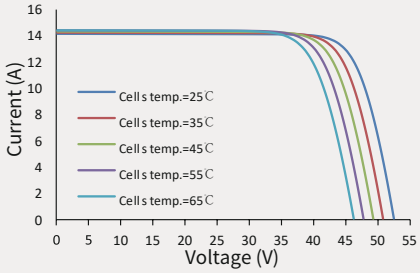
Current-Voltage (590W)




Power-Voltage (590W)




Current-Voltage (590W)




## Temperature Ratings (STC)

| | |
|---|---|
| Temperature coefficient (Pmpp) | -0.29%/°C |
| Temperature coefficient (Isc) | +0.043%/°C |
| Temperature coefficient (Voc) | -0.25%/°C |

## Operating Parameters

| | |
|---|---|
| Bifaciality (Pmpp) | 80±5% |
| Junction box IP rating | IP 68 |
| Max. series fuse rating | 30 A |
| Max. system voltage (IEC/UL) | 1500$V_{DC}$ |

© Chint New Energy Technology Co., Ltd. Reserves the right of final interpretation. please contact our company to use the latest version for contract.
www.astronergy.com