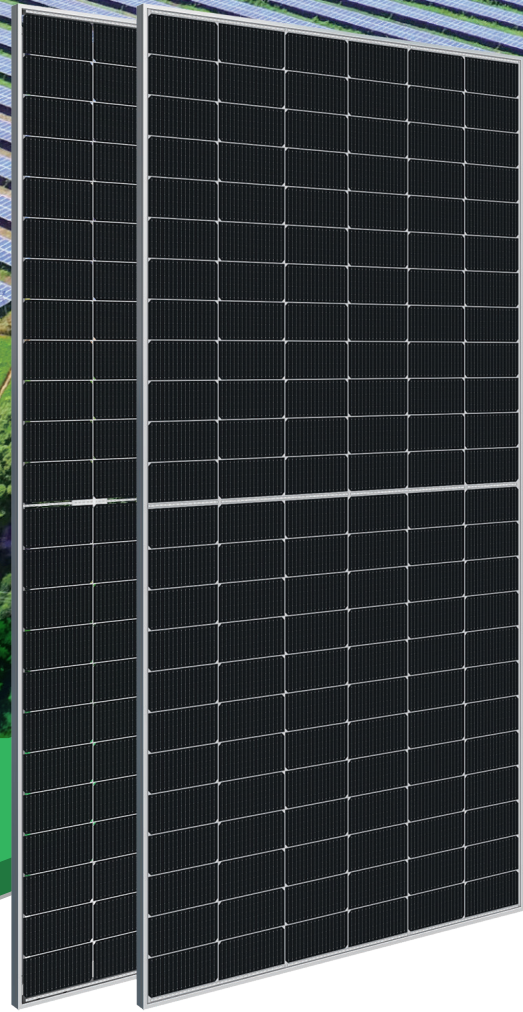
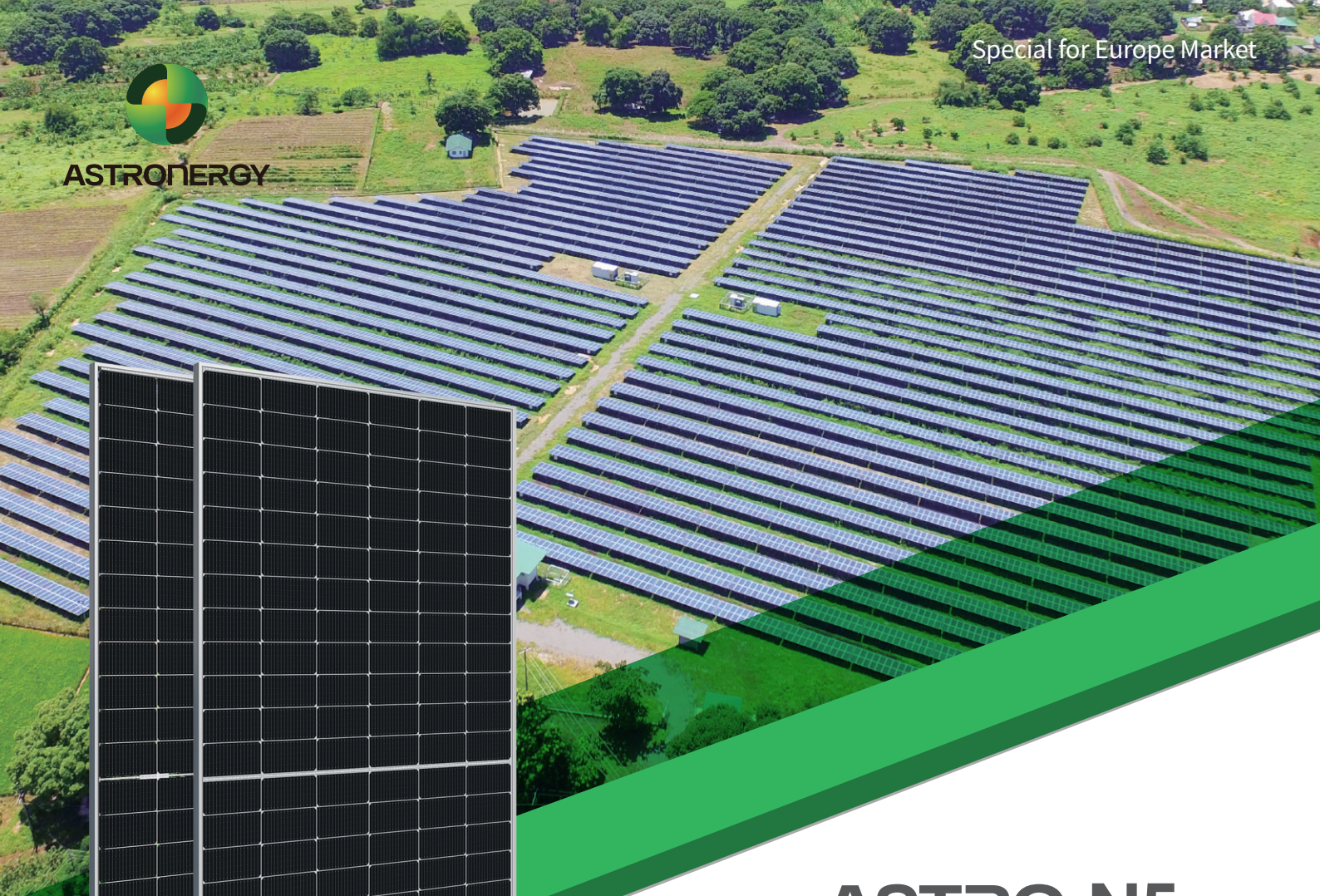




ASTRONERGY



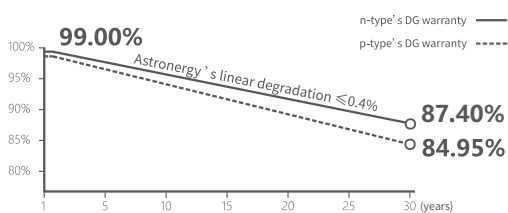
# ASTRO N5

CHSM72N(DG)/F-BH  
Bifacial Series(182)

# 560~580W

## Warranty

- 15** 15-year Product Warranty
- 30** 30-year Linear Power Warranty



## Key Features

- TOPCon / Half-cut
- Low temperature coefficient (Pmpp)
- Non-destructive cutting
- PID resistance
- Low BOS cost & LCOE
- Bifacial gain



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



Tier 1  
BloombergNEF



**560~580W**

POWER RANGE

**0~+5W**

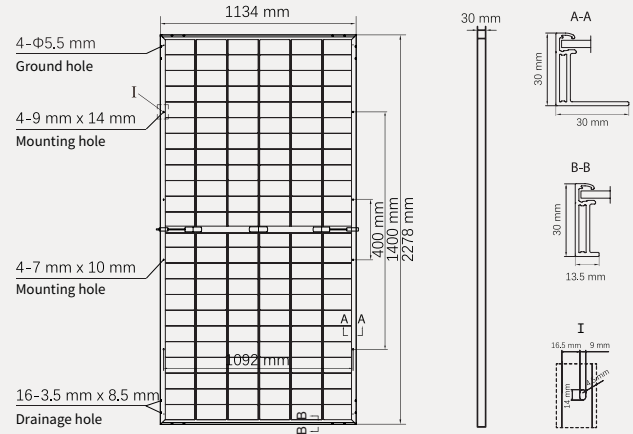
POWER SORTING

**22.5%**MAX MODULE  
EFFICIENCY**≤ 1.0%**FIRST YEAR  
POWER DEGRADATION**≤ 0.4%**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 <sup>2</sup> / 12 AWG
① Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	HCB40 (Standard) / MC4-EVO2A (Optional)
Module weight	32.1 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1207 kg
Modules per 40' HQ container	648 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<sup>2</sup>, Cell Temperature 25° C, AM=1.5

	560	565	570	575	580
Rated output (Pmpp / Wp)					
Rated voltage (Vmpp / V)	42.44	42.61	42.77	42.94	43.11
Rated current (Impp / A)	13.20	13.26	13.33	13.39	13.45
Open circuit voltage (Voc / V)	50.50	50.70	50.90	51.10	51.30
Short circuit current (Isc / A)	13.93	14.02	14.10	14.19	14.28
Module efficiency	21.7%	21.9%	22.1%	22.3%	22.5%

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

	421.1	424.9	428.6	432.4	436.2
Rated output (Pmpp / Wp)					
Rated voltage (Vmpp / V)	39.94	40.10	40.26	40.42	40.59
Rated current (Impp / A)	10.54	10.60	10.65	10.70	10.75
Open circuit voltage (Voc / V)	47.97	48.16	48.35	48.54	48.73
Short circuit current (Isc / A)	11.25	11.32	11.39	11.46	11.53

## Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp / A	Voc / V	Isc / A
5%	599	42.77	13.99	50.90	14.10
10%	627	42.77	14.66	50.90	15.48
15%	656	42.78	15.32	50.91	16.18
20%	684	42.78	15.99	50.91	16.88
25%	713	42.78	16.65	50.91	17.58

Electrical characteristics with different rear power gain (reference to 570W)

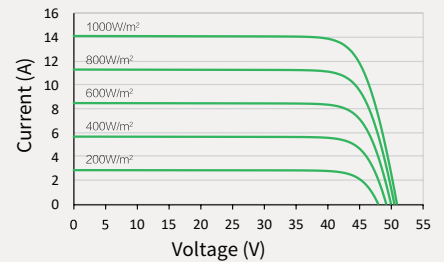
## Temperature Ratings (STC)

## Operating Parameters

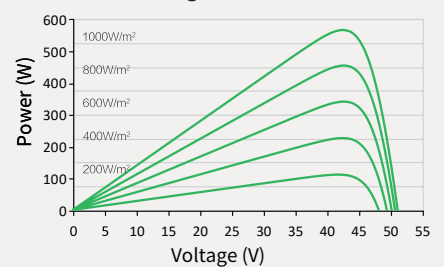
Temperature coefficient (Pmpp)	-0.29%/°C	No. of diodes	3
Temperature coefficient (Isc)	+0.043%/°C	Junction box IP rating	IP 68
Temperature coefficient (Voc)	-0.25%/°C	Max. series fuse rating	30 A
Nominal module operating temperature (NMOT)	41±2°C	Max. system voltage (IEC/UL)	1500V <sub>DC</sub>

## Curve

Current-Voltage (570W)



Power-Voltage (570W)



Current-Voltage (570W)

