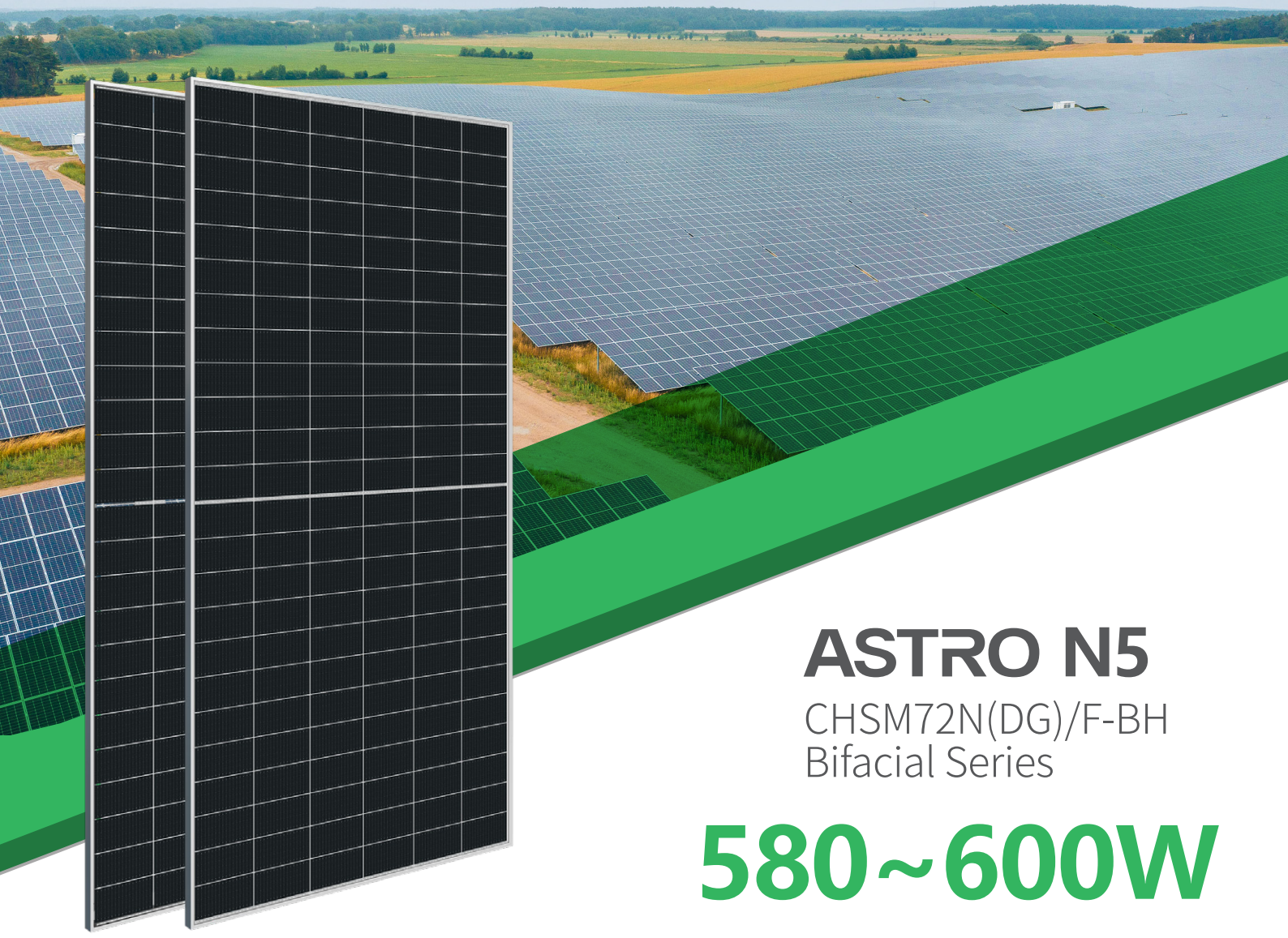
ASTRONERGY



ASTRO N5

CHSM72N(DG)/F-BH
Bifacial Series

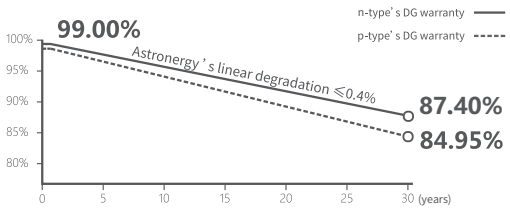
580~600W

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

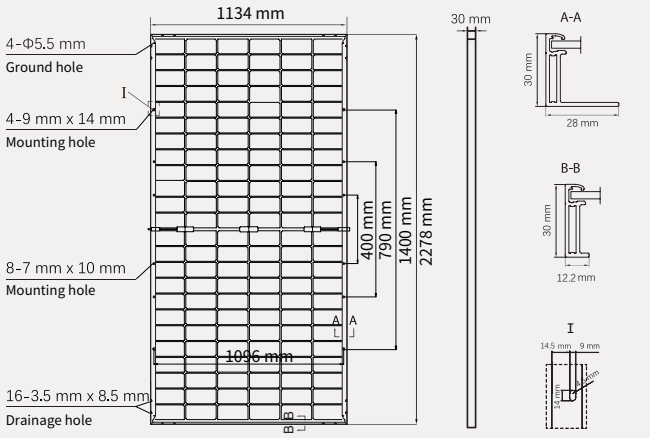
Tier 1 BloombergNEF

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	32.1 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1207 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)	43.11	43.27	43.45	43.61	43.78
Rated current (Impp / A)	13.45	13.52	13.58	13.64	13.70
Open circuit voltage (Voc / V)	51.30	51.50	51.70	51.90	52.10
Short circuit current (Isc / A)	14.28	14.36	14.45	14.53	14.61
Module efficiency	22.5%	22.6%	22.8%	23.0%	23.2%

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

Rated output (Pmpp / Wp)	436.2	439.9	443.7	447.4	451.2
Rated voltage (Vmpp / V)	40.59	40.73	40.89	41.06	41.21
Rated current (Impp / A)	10.75	10.80	10.85	10.90	10.95
Open circuit voltage (Voc / V)	48.73	48.92	49.11	49.30	49.49
Short circuit current (Isc / A)	11.53	11.59	11.66	11.73	11.80

Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp / A	Voc / V	Isc / A
5%	620	43.45	14.26	51.70	15.17
10%	649	43.45	14.94	51.70	15.89
15%	679	43.46	15.62	51.71	16.61
20%	708	43.46	16.30	51.71	17.33
25%	738	43.46	16.98	51.71	18.06

Electrical characteristics with different rear power gain (reference to 590W)

Temperature Ratings (STC)

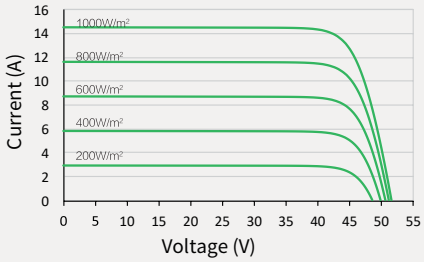
Temperature coefficient (Pmpp)	-0.29%/°C
Temperature coefficient (Isc)	+0.043%/°C
Temperature coefficient (Voc)	-0.25%/°C
Nominal module operating temperature (NMOT)	41±2°C

Operating Parameters

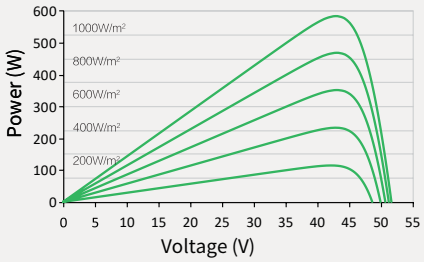
No. of diodes	3
Junction box IP rating	IP 68
Max. series fuse rating	30 A
Max. system voltage (IEC/UL)	1500V_{DC}

Curve

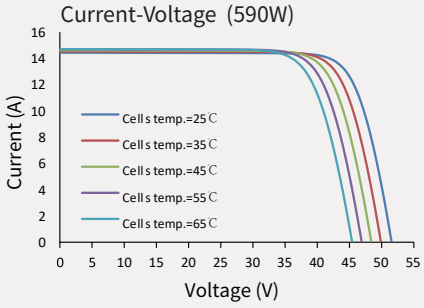
Current-Voltage (590W)



Power-Voltage (590W)



Current-Voltage (590W)



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