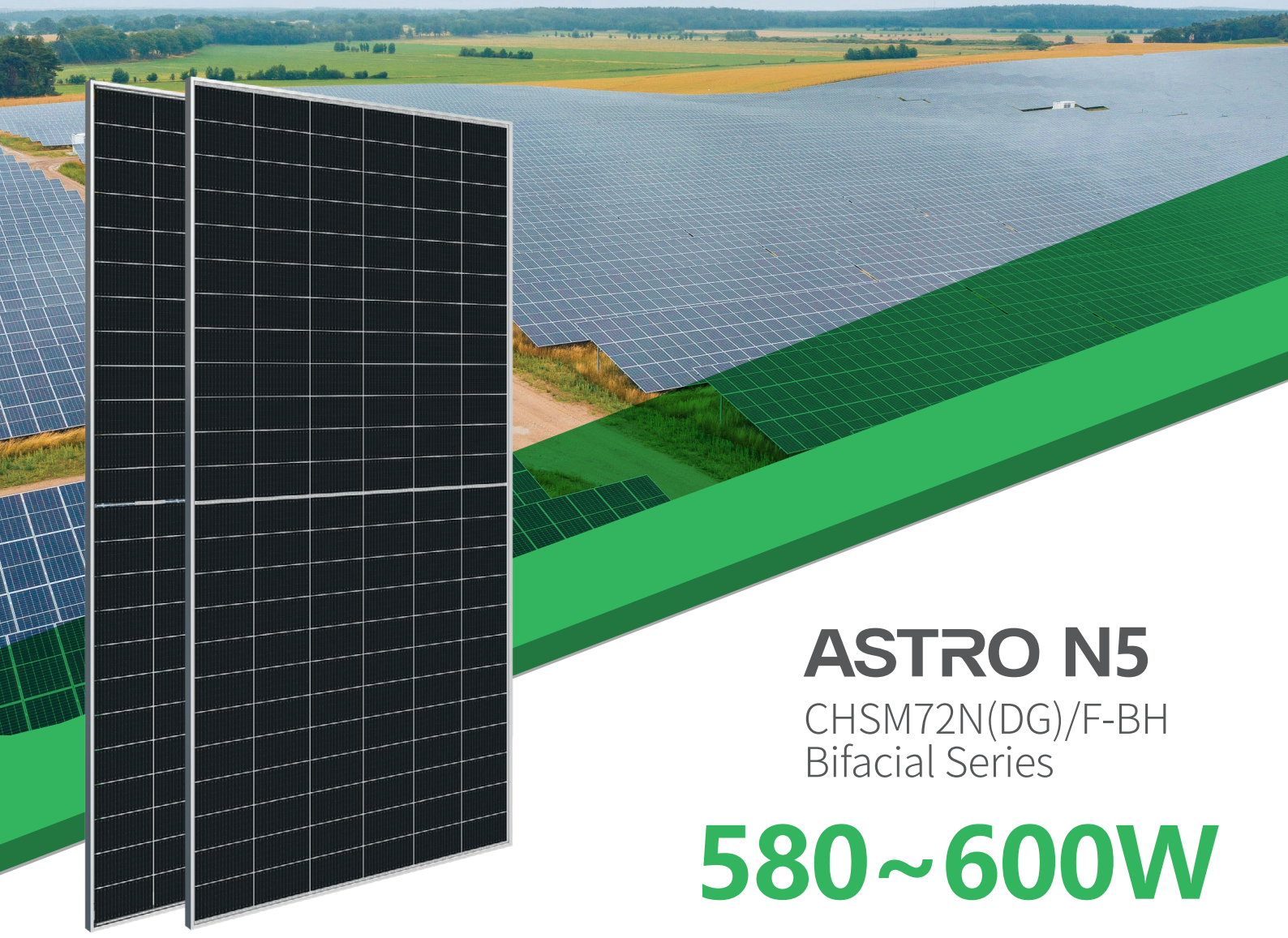
ASTRONERGY



ASTRO N5

CHSM72N(DG)/F-BH
Bifacial Series

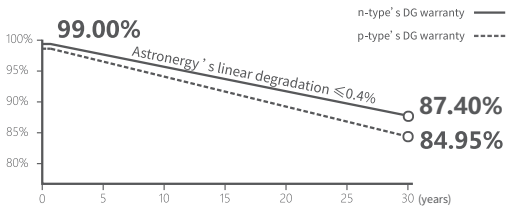
580~600W

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

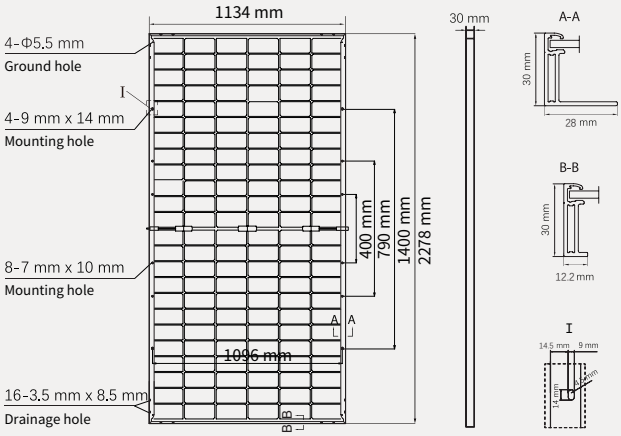
Underwritten by International Insurer

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

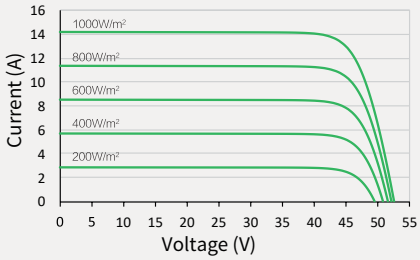
Rated output (Pmpp / Wp)	580	585	590	595	600
Rated voltage (Vmpp / V)	43.70	43.88	44.05	44.21	44.38
Rated current (Impp / A)	13.27	13.33	13.40	13.46	13.52
Open circuit voltage (Voc / V)	52.21	52.42	52.62	52.81	53.01
Short circuit current (Isc / A)	14.01	14.07	14.13	14.20	14.26
Module efficiency	22.5%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

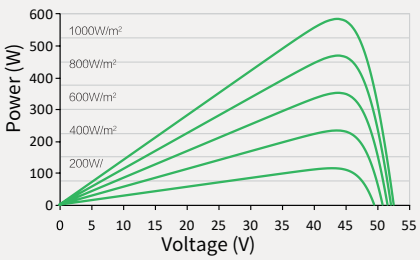
Rated output (Pmpp / Wp)	641.3	646.8	652.4	657.9	663.4
Rated voltage (Vmpp / V)	43.71	43.89	44.06	44.23	44.40
Rated current (Impp / A)	14.67	14.74	14.81	14.88	14.94
Open circuit voltage (Voc / V)	52.23	52.44	52.63	52.83	53.02
Short circuit current (Isc / A)	15.55	15.62	15.69	15.76	15.83

Curve

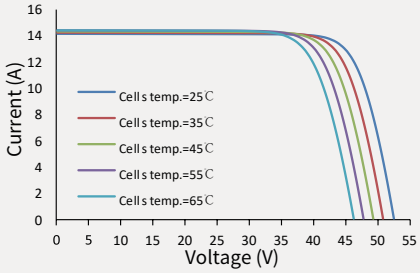
Current-Voltage (590W)



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)	1500V_{DC}

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