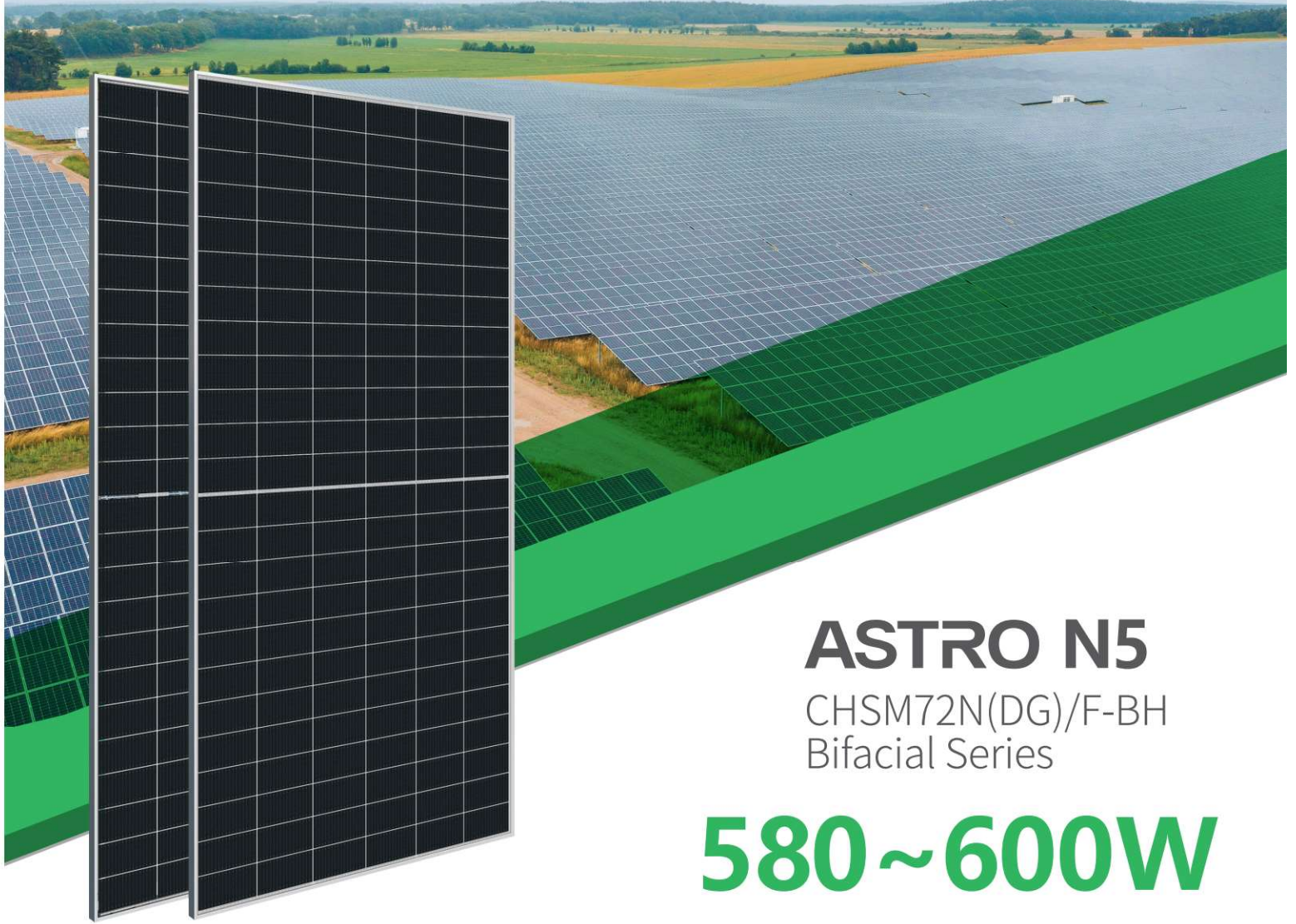




ASTRONERGY



ASTRO N5

CHSM72N(DG)/F-BH
Bifacial Series

580~600W



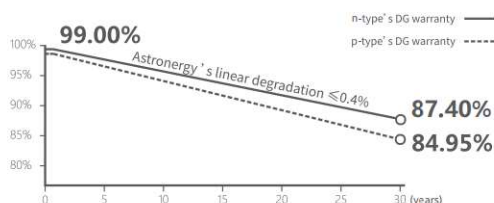
Warranty



15-year Product Warranty



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

$\leq -0.29\%/^{\circ}\text{C}$, 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



580~600W

POWER RANGE

0~+3%

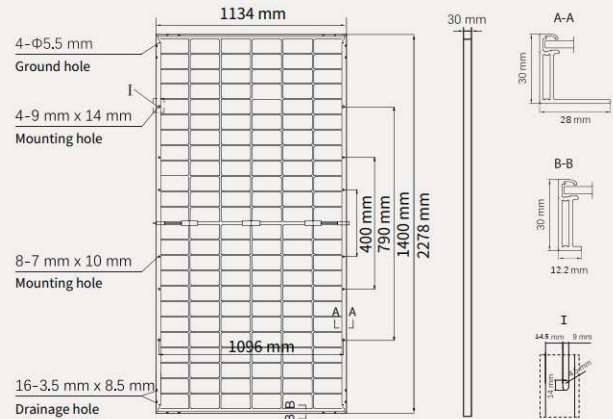
POWER SORTING

23.2%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 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/m², Cell Temperature 25° C, AM=1.5

Rated output (P _{mpp} / W _p)	580	585	590	595	600
Rated voltage (V _{mpp} / V)	43.70	43.88	44.05	44.21	44.38
Rated current (I _{mpp} / A)	13.27	13.33	13.40	13.46	13.52
Open circuit voltage (V _{oc} / V)	52.21	52.42	52.62	52.81	53.01
Short circuit current (I _{sc} / 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/m², rear 135W/m², Cell Temperature 25° C, AM=1.5

Rated output (P _{mpp} / W _p)	635	640	645	650	655
Rated voltage (V _{mpp} / V)	43.79	43.96	44.11	44.26	44.40
Rated current (I _{mpp} / A)	14.50	14.56	14.62	14.69	14.75
Open circuit voltage (V _{oc} / V)	52.39	52.58	52.75	52.93	53.10
Short circuit current (I _{sc} / A)	15.37	15.43	15.49	15.56	15.63

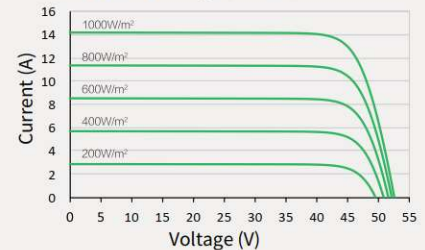
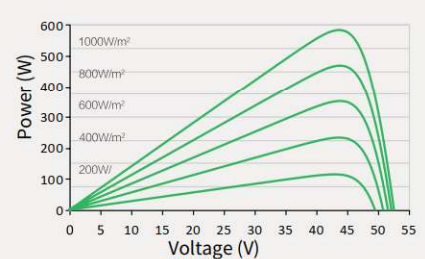
Temperature Ratings (STC)

Temperature coefficient (P _{mpp})	-0.29%/°C
Temperature coefficient (I _{sc})	+0.043%/°C
Temperature coefficient (V _{oc})	-0.25%/°C

Operating Parameters

Bifaciality (P _{mpp})	80±5%
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)**