



ASTRONERGY



ASTRO N5

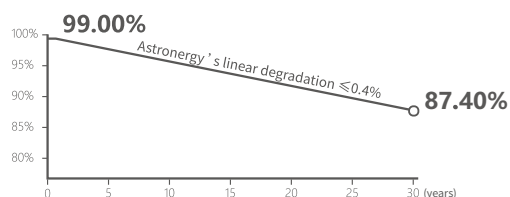
CHSM72N(DG)/F-BH
Bifacial Series

590~610W

Warranty

15 15-year Product Warranty

30 30-year Linear Power Warranty



PID Resistance

Excellent PID resistance, meeting higher standards for particularly harsh environments.



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



590~610W

POWER RANGE

0~+3%

POWER SORTING

23.6%

MAX MODULE
EFFICIENCY

≤ 1.0%

FIRST YEAR
POWER DEGRADATION

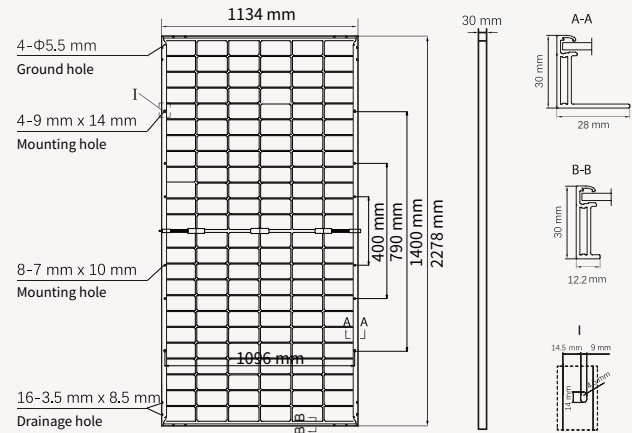
≤ 0.4%

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	576 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 (Pmpp / Wp)	590	595	600	605	610
Rated voltage (Vmpp / V)	43.45	43.61	43.78	43.95	44.12
Rated current (Impp / A)	13.58	13.64	13.70	13.77	13.83
Open circuit voltage (Voc / V)	51.70	51.90	52.10	52.30	52.50
Short circuit current (Isc / A)	14.45	14.53	14.61	14.70	14.78
Module efficiency	22.8%	23.0%	23.2%	23.4%	23.6%

NMOT: Irradiance 800W/m², Ambient Temperature 20° C, AM=1.5, Wind Speed 1m/s

Rated output (Pmpp / Wp)	443.7	447.4	451.2	455.0	458.7
Rated voltage (Vmpp / V)	40.89	41.06	41.21	41.37	41.53
Rated current (Impp / A)	10.85	10.90	10.95	11.00	11.05
Open circuit voltage (Voc / V)	49.11	49.30	49.49	49.68	49.87
Short circuit current (Isc / A)	11.66	11.73	11.80	11.87	11.93

Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp / A	Voc / V	Isc / A
5%	625	43.61	14.32	51.90	15.26
10%	655	43.61	15.00	51.90	15.98
15%	684	43.62	15.69	51.91	16.71
20%	714	43.62	16.37	51.91	17.44
25%	744	43.62	17.05	51.91	18.16

Electrical characteristics with different rear power gain (reference to 595W)

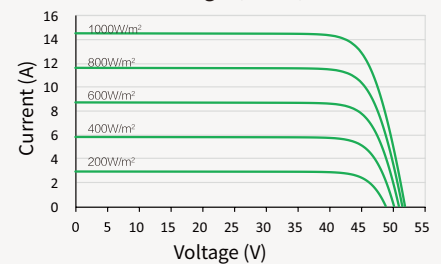
Temperature Ratings (STC)

Operating Parameters

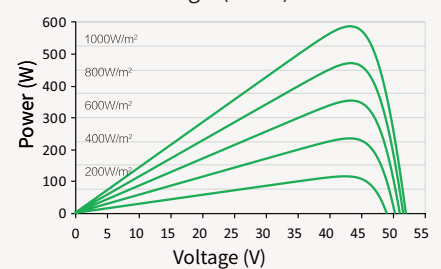
Temperature coefficient (Pmpp)	-0.29%/°C	No. of diodes	3
Temperature coefficient (Isc)	+0.043%/°C	Junction box IP rating	IP 68
Temperature coefficient (Voc)	-0.25%/°C	Max. series fuse rating	30 A
Nominal module operating temperature (NMOT)	41±2°C	Max. system voltage (IEC/UL)	1500V _{DC}

Curve

Current-Voltage (595W)



Power-Voltage (595W)



Current-Voltage (595W)

