

ASTRO N7s 2.0

CHSM48RN(DG)(BLH)/F-BH
Bifacial Series

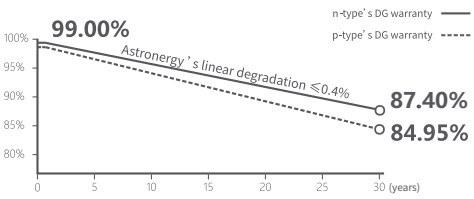
450~470W

Assist carbon neutrality

Warranty

25 25-year Product Warranty

30 30-year Linear Power Warranty



n-type TOPCon 5.0
Newly upgraded cell technology, ultra-high product energy efficiency

ZBB Design
Zero-busbar integrated interconnection

Sleek Design
< 2 ㎡ area, easy to transport and install

All-black Technology
Sleek crystalline black appearance, seamlessly blending into rooftops

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

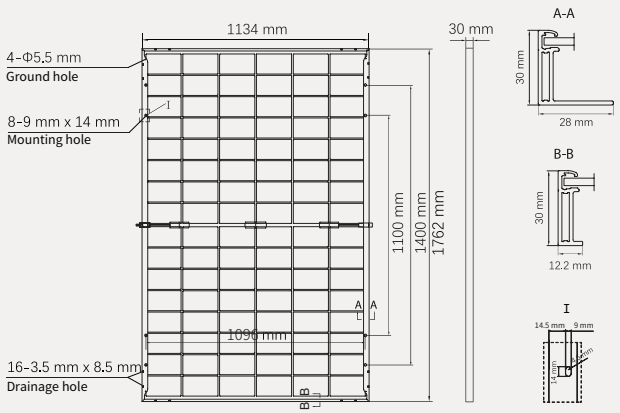
Underwritten by International Insurer

450~470W	0~+3%	23.5%	≤ 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)	1762 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	96 (6*16)
Frame technology	Aluminum, black anodized
Front / Back glass	2.0+2.0 mm
Cable length (Including connector)	Landscape: 1200 mm; or Customized length
Cable diameter (IEC/UL)	4 mm^2 / 12 AWG
① Maximum mechanical test load	6000 Pa (front) / 4000 Pa (back)
Connector type (IEC/UL)	MC4-EVO2A (Standard) / HCB40 (Optional)
Module weight	24.5 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	927 kg
Modules per 40' HQ container	936 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

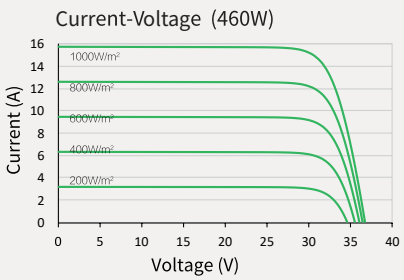
STC: Irradiance 1000W/m^2, Cell Temperature 25° C, AM=1.5, Power measurement tolerance: ±3%

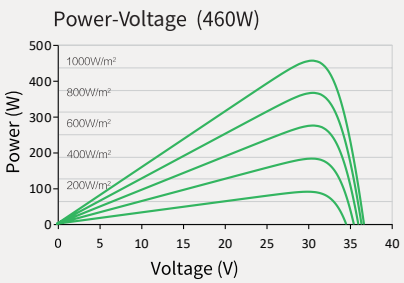
Rated output (Pmpp / Wp)	450	455	460	465	470
Rated voltage (Vmpp / V)	30.51	30.65	30.78	30.80	30.82
Rated current (Impp / A)	14.75	14.85	14.94	15.10	15.25
Open circuit voltage (Voc / V)	36.59	36.75	36.91	36.93	36.95
Short circuit current (Isc / A)	15.61	15.71	15.81	15.84	16.00
Module efficiency	22.5%	22.8%	23.0%	23.3%	23.5%

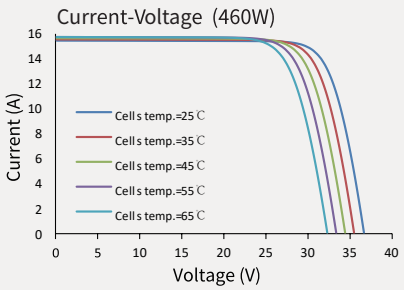
BNPI: Irradiance: front 1000W/m^2, rear 135W/m^2, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	495.9	501.4	506.9	512.4	517.9
Rated voltage (Vmpp / V)	30.52	30.66	30.79	30.81	30.83
Rated current (Impp / A)	16.25	16.35	16.46	16.63	16.80
Open circuit voltage (Voc / V)	36.60	36.76	36.92	36.94	36.96
Short circuit current (Isc / A)	17.28	17.39	17.50	17.53	17.86

Curve







Temperature Ratings (STC)

Temperature coefficient (Pmpp)	-0.29%/°C
Temperature coefficient (Isc)	+0.043%/°C
Temperature coefficient (Voc)	-0.25%/°C

Operating Parameters

Operating Temperature	-40°C ~+85°C
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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