ASTRONERGY



ASTRO N7s 2.0

CHSM48RN(DG)/F-BH
Bifacial Series

450~475W

Assist carbon neutrality

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

Integrated Appearance
Streamlined design without busbars, perfect for upscale zero-carbon buildings

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

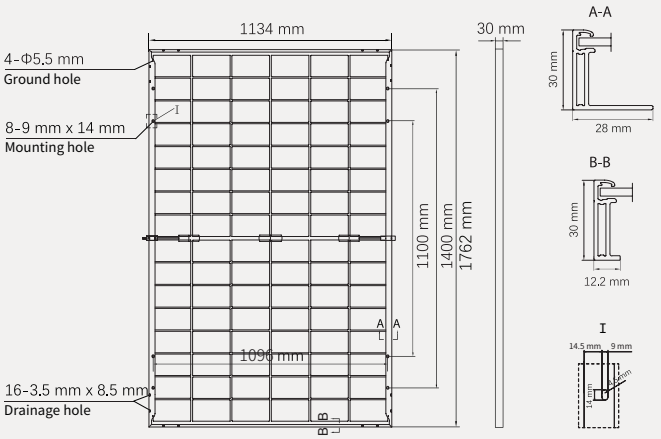
Underwritten by International Insurer

450~475W	0~+3%	23.8%	≤ 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

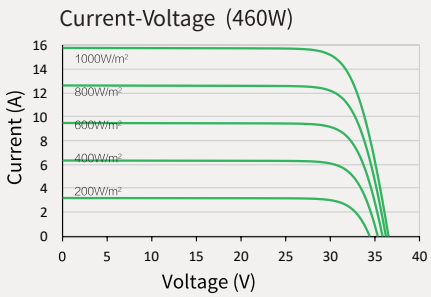
STC: Irradiance 1000W/m^2, Cell Temperature 25° C, AM=1.5, Power measurement tolerance: ±3%

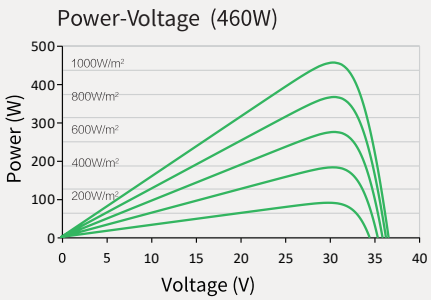
Rated output (Pmpp / Wp)	450	455	460	465	470	475
Rated voltage (Vmpp / V)	30.33	30.47	30.60	30.73	30.75	30.78
Rated current (Impp / A)	14.83	14.93	15.03	15.13	15.28	15.43
Open circuit voltage (Voc / V)	36.42	36.58	36.74	36.90	36.92	36.95
Short circuit current (Isc / A)	15.68	15.78	15.88	15.98	15.99	16.15
Module efficiency	22.5%	22.8%	23.0%	23.3%	23.5%	23.8%

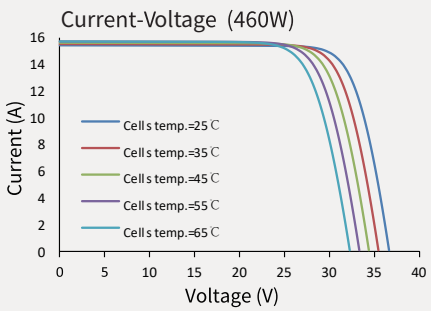
BNPI: Irradiance: front 1000W/m^2, rear 135W/m^2, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	495.9	501.4	506.9	512.4	517.9	523.5
Rated voltage (Vmpp / V)	30.34	30.48	30.61	30.74	30.76	30.79
Rated current (Impp / A)	16.34	16.45	16.56	16.67	16.84	17.00
Open circuit voltage (Voc / V)	36.43	36.59	36.75	36.91	36.93	36.96
Short circuit current (Isc / A)	17.36	17.47	17.58	17.69	17.70	18.04

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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