



ASTRONERGY



ASTRO N7s 2.0

CHSM54RN(DG)/F-BH
Bifacial Series

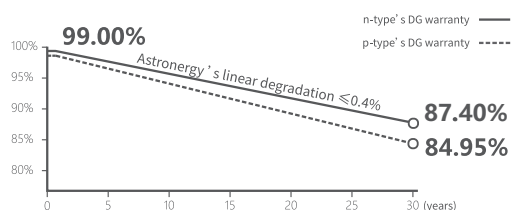
510~530W

Warranty

- 30**

30-year Product Warranty
(Specified for rooftop market)
- 30**

30-year Linear Power Warranty
(Only to the front-side of modules)



Key Features

- High efficiency n-type TOPCon cells
- Dual glass for improved durability
- Manufacturing with AI technology
- Suitable for residential systems
- Easy to install and transport



ISO 9001:2015:ISO Quality Management System
ISO 14001:2015:ISO Environment Management System
ISO 45001:Occupational Health and Safety



Tier 1
BloombergNEF



510~530W

POWER RANGE

±5W

POWER SORTING

23.8%

MAX MODULE
EFFICIENCY

≤ 1.0%

FIRST YEAR
POWER DEGRADATION

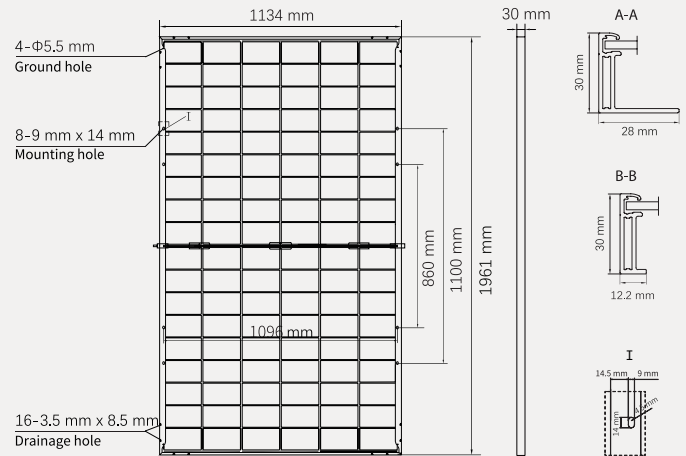
≤ 0.4%

YEAR 2-30
POWER DEGRADATION

Mechanical Specifications

Outer dimensions (L x W x H)	1961 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	108 (6*18)
Frame technology	Aluminum, black (silver optional)
Front / Back glass	2.0+2.0 mm
Cable length (Including connector)	landscape: (+) 1200mm, (-) 1200mm; 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)	PV-KST4EVO2A/xy, PV-KBT4-EVO2A/xy (Staubli) (standard) or PV-HCB40 (Chint New Energy) (optional)
Module weight	26.9 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1016 kg
Modules per 40' HQ container	864 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 CHSM54RN(DG)/F-BH-XXX(XXX=510~530)

STC: Irradiance 1000W/m², Cell Temperature 25° C, AM=1.5

Rated output (P _{mpp} / Wp)	510	515	520	525	530
Rated voltage (V _{mpp} / V)	34.29	34.42	34.44	34.52	34.60
Rated current (I _{mpp} / A)	14.87	14.96	15.10	15.21	15.32
Open circuit voltage (V _{oc} / V)	41.21	41.37	41.39	41.49	41.59
Short circuit current (I _{sc} / A)	15.70	15.79	15.82	15.93	16.04
Module efficiency	22.9%	23.2%	23.4%	23.6%	23.8%

Tolerance: P_{mpp} ±3%, V_{oc} ±3% and I_{sc} ±4%.

BNPI & BSI: Bifaciality(φP_{mpp}/φI_{sc}) : 80±5 %, Bifaciality(φV_{oc}) : 98±5 %

Rated output (P _{mpp} / Wp)	562.0	567.5	573.0	578.6	584.1
Rated voltage (V _{mpp} / V)	34.30	34.43	34.45	34.53	34.61
Rated current (I _{mpp} / A)	16.39	16.48	16.64	16.75	16.87
Open circuit voltage (V _{oc} / V)	41.22	41.38	41.40	41.50	41.60
Short circuit current (I _{sc} / A)	17.47	17.57	17.62	17.74	17.87
I _{sc} [aBSI (BSI)]	19.64	19.75	19.82	19.96	20.10

BNPI : Irradiance: front 1000W/m², rear 135W/m², Cell Temperature 25° C, AM=1.5

aBSI (BSI) : Irradiance: front 1000W/m², rear 300W/m²

Electrical characteristics with 10% Bifacial Gains

Rated output (P _{mpp} / Wp)	561.00	566.50	572.00	577.50	583.00
Rated voltage (V _{mpp} / V)	34.29	34.42	34.44	34.52	34.60
Rated current (I _{mpp} / A)	16.36	16.46	16.61	16.73	16.85
Open circuit voltage (V _{oc} / V)	41.22	41.37	41.39	41.49	41.59
Short circuit current (I _{sc} / A)	17.27	17.37	17.41	17.53	17.65

Temperature Ratings (STC)

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

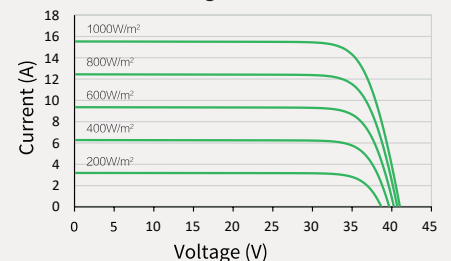
Fire performance: Class C

Operating Parameters

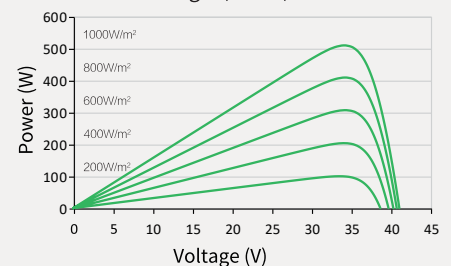
Operating Temperature	-40°C ~+85°C
No. of diodes	3
Junction box IP rating	IP 68
Max. series fuse rating	30 A
Max. system voltage (IEC/UL)	1500V _{DC}
Module [T98] max [°C]:	70

Curve

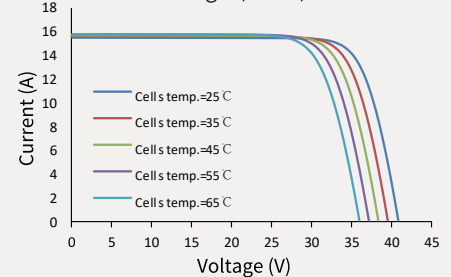
Current-Voltage (510W)



Power-Voltage (510W)



Current-Voltage (510W)



Made in China, Made in Turkey.

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