



ASTRONERGY



ASTRO N5s

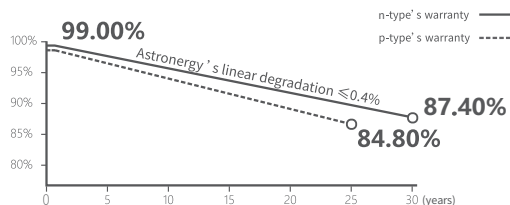
CHSM54N-HC
Monofacial Series

450~455W

Warranty

25 25-year Product Warranty
(special for rooftop market)

30 30-year Linear Power Warranty



Key Features

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



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



Tier 1
BloombergNEF



450~455W

POWER RANGE

0~+3%

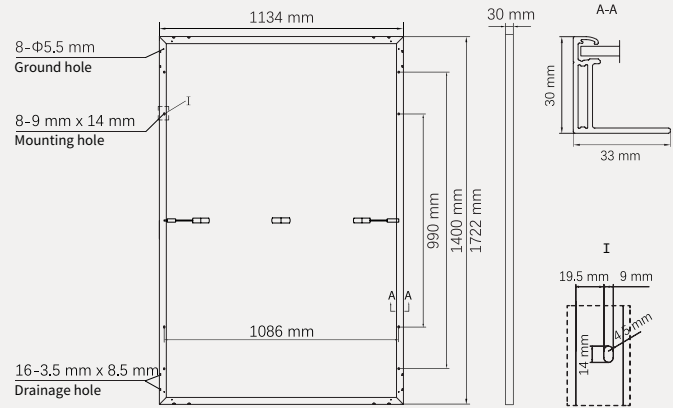
POWER SORTING

23.3%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)	1722 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	108 (6*18)
Frame technology	Aluminum, black anodized
Front glass thickness	3.2 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)	PV-HCB40 (Chint New Energy) or PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy (Stäubli)
Module weight	21.3 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	811 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

CHSM54N-HC-XXX(XXX=450~455)

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

Rated output (Pmpp / Wp)	450	455
Rated voltage (Vmpp / V)	33.18	33.35
Rated current (Impp / A)	13.56	13.64
Open circuit voltage (Voc / V)	39.96	40.16
Short circuit current (Isc / A)	14.21	14.30
Module efficiency	23.0%	23.3%

Tolerance: Pmpp ±3%, Voc ±3% and Isc ±4%.

Temperature Ratings (STC)

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

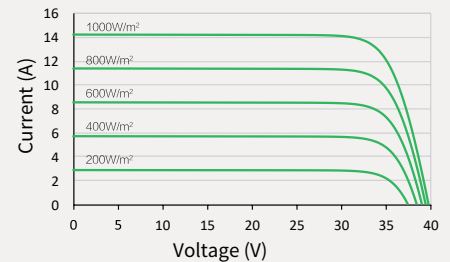
Operating Parameters

No. of diodes	3
Junction box IP rating	IP 68
Max. series fuse rating	25 A
Max. system voltage (IEC/UL)	1500V _{DC}

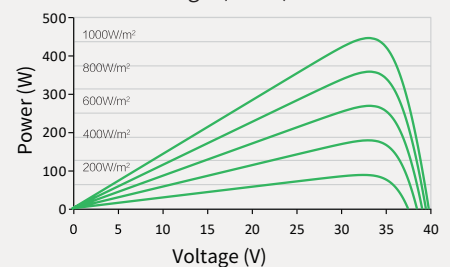
Fire performance: Class C

Curve

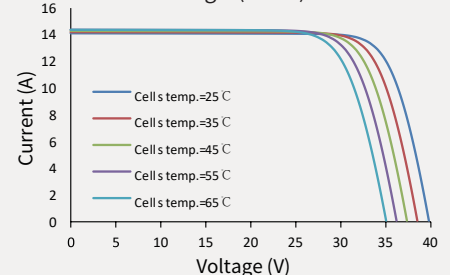
Current-Voltage (450W)



Power-Voltage (450W)



Current-Voltage (450W)



Made in China, Made in Turkey.

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<http://www.astronergy.com.au>

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