



ASTRONERGY



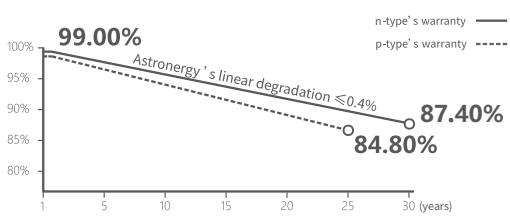
ASTRO N5

CHSM78N-HC
Monofacial Series(182)

610~630W

Warranty

- 12** 12-year Product Warranty
- 30** 30-year Linear Power Warranty



Key Features

- TOPCon / Half-cut
- Better temperature coefficient (Pmpp)
- Non-destructive cutting
- Low BOS cost & LCOE



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



Tier 1
BloombergNEF



610~630W

POWER RANGE

0~+5W

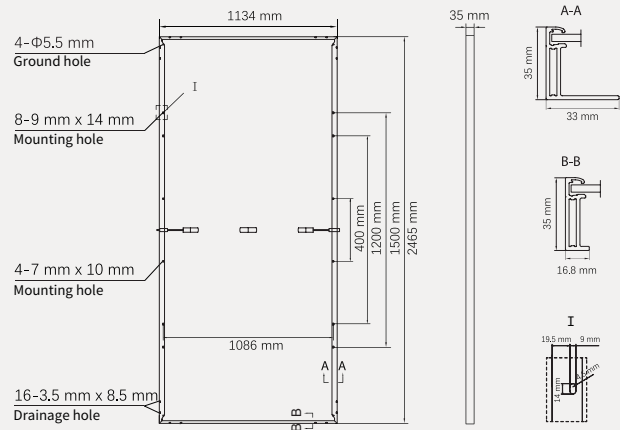
POWER SORTING

22.5%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)	2465 x 1134 x 35 mm
Cell type	n-type mono-crystalline
No. of cells	156 (6*26)
Frame technology	Aluminum, silver 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 (Astronergy) or PV-KST4-EVO2A/ xy,PV-KBT4-EVO2A/xy (Stäubli)
Module weight	29 kg
Packing unit	31 pcs / box (Subject to sales contract)
Weight of packing unit (for 40'HQ container)	954 kg
Modules per 40' HQ container	496 pcs

① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.



Electrical Specifications CHSM78N-HC-XXX(XXX=610-630)

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

	610	615	620	625	630
Rated output (Pmpp / Wp)	610	615	620	625	630
Rated voltage (Vmpp / V)	45.47	45.64	45.80	45.97	46.13
Rated current (Impp / A)	13.42	13.48	13.54	13.60	13.66
Open circuit voltage (Voc / V)	55.02	55.22	55.42	55.62	55.82
Short circuit current (Isc / A)	13.95	14.03	14.11	14.19	14.27
Module efficiency	21.8%	22.0%	22.2%	22.4%	22.5%

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

	610	615	620	625	630
Rated output (Pmpp / Wp)	458.7	462.5	466.2	470.0	473.8
Rated voltage (Vmpp / V)	42.80	42.96	43.11	43.27	43.42
Rated current (Impp / A)	10.72	10.77	10.81	10.86	10.91
Open circuit voltage (Voc / V)	52.26	52.45	52.64	52.83	53.02
Short circuit current (Isc / A)	11.26	11.32	11.39	11.45	11.52

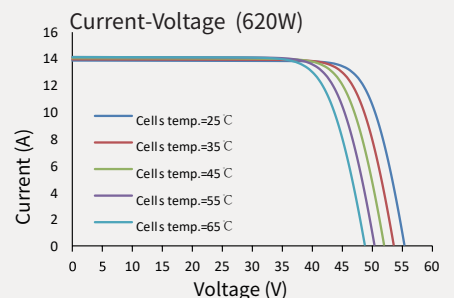
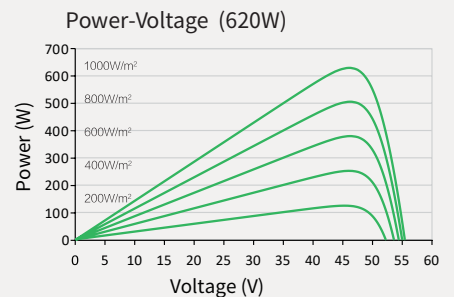
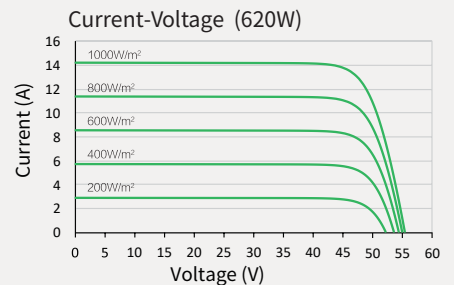
Power Sorting: 0~+5W Power tolerance: +/- 3%

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	25 A
Nominal module operating temperature (NMOT)	41±2°C	Max. system voltage (IEC/UL)	1500V _{DC}

Fire performance: Class C

Curve



Made in China, Made in Thailand.

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

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