



ASTRONERGY

Special for Australian Market

(preliminary)

ASTRO N5s

Create Sustainable and Efficient Green Energy

CHSM54N(DG)/F-HC
Monofacial Series (182)

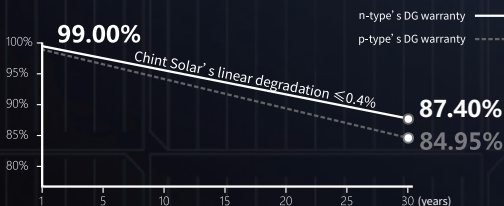
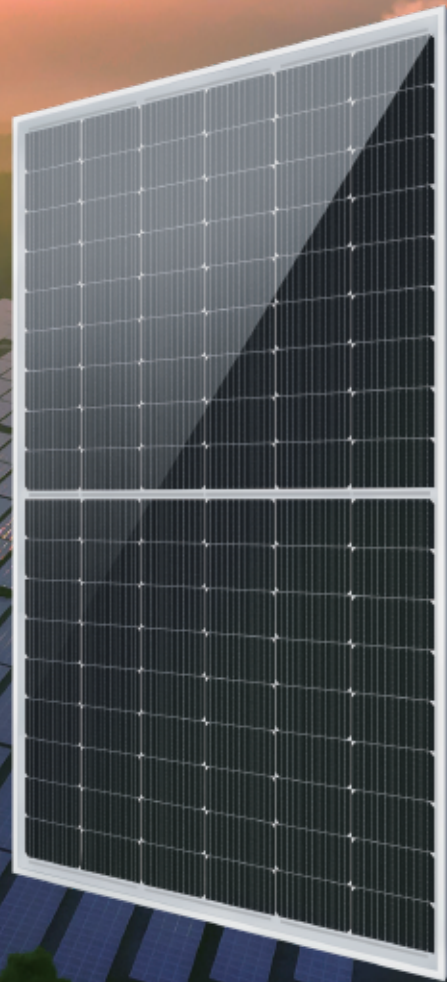
415~435W

TOPCon / Half-cut

Low temperature coefficient (Pmpp)

Non-destructive cutting

Low BOS cost & LCOE



30-year Product Warranty (special for rooftop market)

30-year Linear Power Warranty



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.

Tier 1
BloombergNEF



415~435W

POWER RANGE

0~+5W

POWER SORTING

22.3%MAX MODULE
EFFICIENCY**≤ 1.0%**FIRST YEAR
POWER DEGRADATION**≤ 0.4%**YEAR 2-30 POWER
DEGRADATION

Electrical Specifications

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

Type	CHSM54N(DG)/F -HC-415	CHSM54N(DG)/F -HC-420	CHSM54N(DG)/F -HC-425	CHSM54N(DG)/F -HC-430	CHSM54N(DG)/F -HC-435
Rated output (Pmpp / Wp)	415	420	425	430	435
Rated voltage (Vmpp / V)	32.49	32.62	32.74	32.87	32.99
Rated current (Impp / A)	12.77	12.88	12.98	13.08	13.18
Open circuit voltage (Voc / V)	38.66	38.81	38.96	39.11	39.26
Short circuit current (Isc / A)	13.47	13.59	13.72	13.85	13.97
Module efficiency	21.3%	21.5%	21.8%	22.0%	22.3%

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

Rated output (Pmpp / Wp)	312.1	315.8	319.6	323.4	327.1
Rated voltage (Vmpp / V)	30.58	30.70	30.82	30.94	31.06
Rated current (Impp / A)	10.21	10.29	10.37	10.45	10.53
Open circuit voltage (Voc / V)	36.72	36.87	37.01	37.15	37.29
Short circuit current (Isc / A)	10.87	10.97	11.08	11.18	11.28

Power Sorting: 0~+5W

Measurement tolerance +/- 3.5%

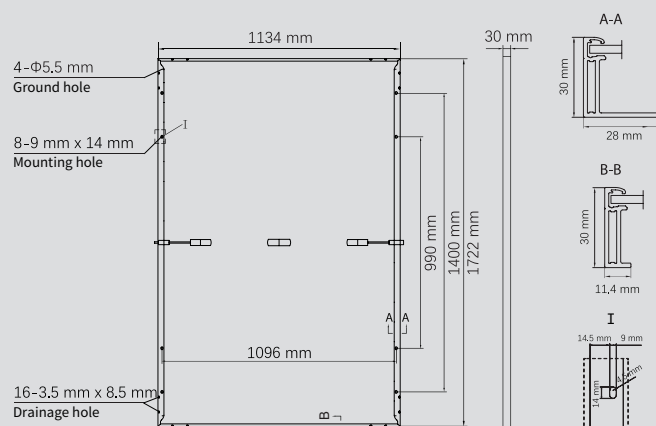
Temperature Ratings (STC)

Temperature coefficient (Pmpp)	-0.30%/°C	No. of diodes	3
Temperature coefficient (Isc)	+0.043%/°C	Junction box IP rating	IP 68
Temperature coefficient (Voc)	-0.24%/°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 A		

Operating Parameters

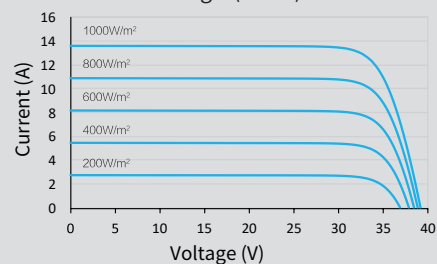
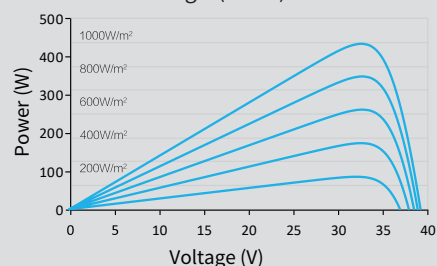
Mechanical Specifications

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, silver anodized
Front / Back glass	1.6+1.6 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	20.8 kg
Packing unit	36 pcs / box (Subject to sales contract)
Weight of packing unit (for 40'HQ container)	793 kg
Modules per 40' HQ container	936 pcs



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

Curve

Current-Voltage (425W)**Power-Voltage (425W)****Current-Voltage (425W)**