ASTRONERGY

ASTRO N5s

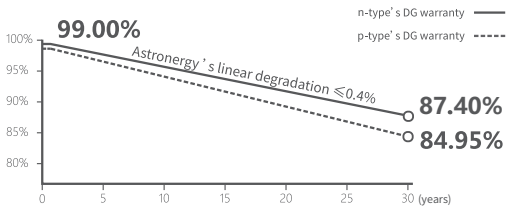
CHSM54N(DGT)(BLH)/F-BH
Bifacial Series(182)

415~430W

Warranty

15/25 15-year Product Warranty
25-year Product Warranty
(Optional,special for rooftop market)

30 30-year Linear Power Warranty



Key Features

- Suitable for distributed projects
- High power
- High reliability
- Easy to install and transport
- Bifacial gain

Assist carbon neutrality CO_2

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

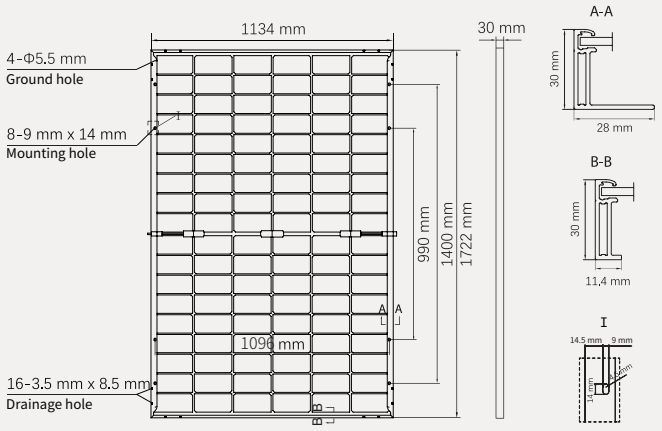
TOP PERFORMER PVEL member of group kiwa
Tier 1 BloombergNEF
Underwritten by International Insurer

415~430W	0~+3%	22.0%	≤ 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)	1722 x 1134 x 30 mm
Cell type	n-type Mono-crystalline
No. of cells	108 (6*18)
Frame technology	Aluminum, black 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)	HCB40 / MC4-EVO2A (optional)
Module weight	20.8 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	793 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

Rated output (Pmpp / Wp)	415	420	425	430
Rated voltage (Vmpp / V)	32.02	32.18	32.35	32.52
Rated current (Impp /A)	12.96	13.05	13.14	13.22
Open circuit voltage (Voc / V)	38.10	38.30	38.50	38.70
Short circuit current (Isc /A)	13.70	13.81	13.92	14.01
Module efficiency	21.3%	21.5%	21.8%	22.0%

NMOT: Irradiance 800W/m^2, Ambient Temperature 20° C, AM=1.5, Wind Speed 1m/s

Rated output (Pmpp / Wp)	312.1	315.8	319.6	323.4
Rated voltage (Vmpp / V)	30.14	30.29	30.45	30.61
Rated current (Impp /A)	10.36	10.43	10.50	10.56
Open circuit voltage (Voc / V)	36.19	36.38	36.57	36.76
Short circuit current (Isc /A)	11.06	11.15	11.24	11.31

Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp /A	Voc / V	Isc /A
5%	441	32.18	13.70	38.30	14.47
10%	462	32.18	14.36	38.30	15.15
15%	483	32.19	15.00	38.31	15.84
20%	504	32.19	15.66	38.31	16.53
25%	525	32.20	16.30	38.32	17.21

Electrical characteristics with different rear power gain (reference to 420W)

Temperature Ratings (STC)

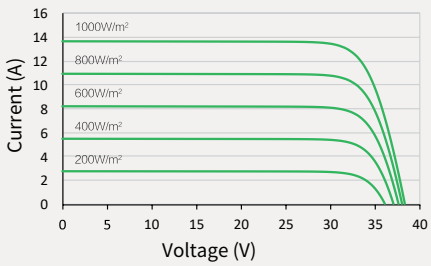
Temperature coefficient (Pmpp)	-0.29%/°C
Temperature coefficient (Isc)	+0.043%/°C
Temperature coefficient (Voc)	-0.25%/°C
Nominal module operating temperature (NMOT)	41±2°C

Operating Parameters

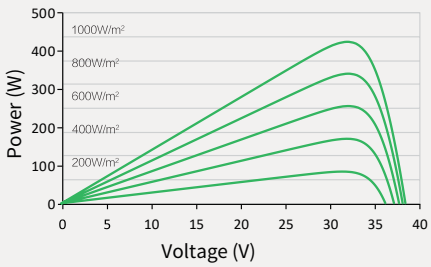
No. of diodes	3
Junction box IP rating	IP 68
Max. series fuse rating	30 A
Max. system voltage (IEC/UL)	1500V_{DC}

Curve

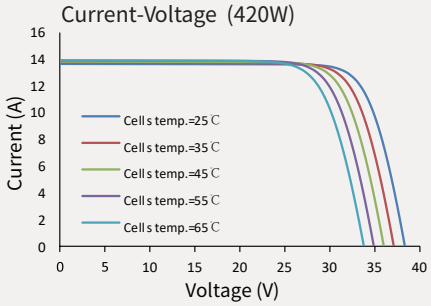
Current-Voltage (420W)



Power-Voltage (420W)



Current-Voltage (420W)



https://www.astronergy.com