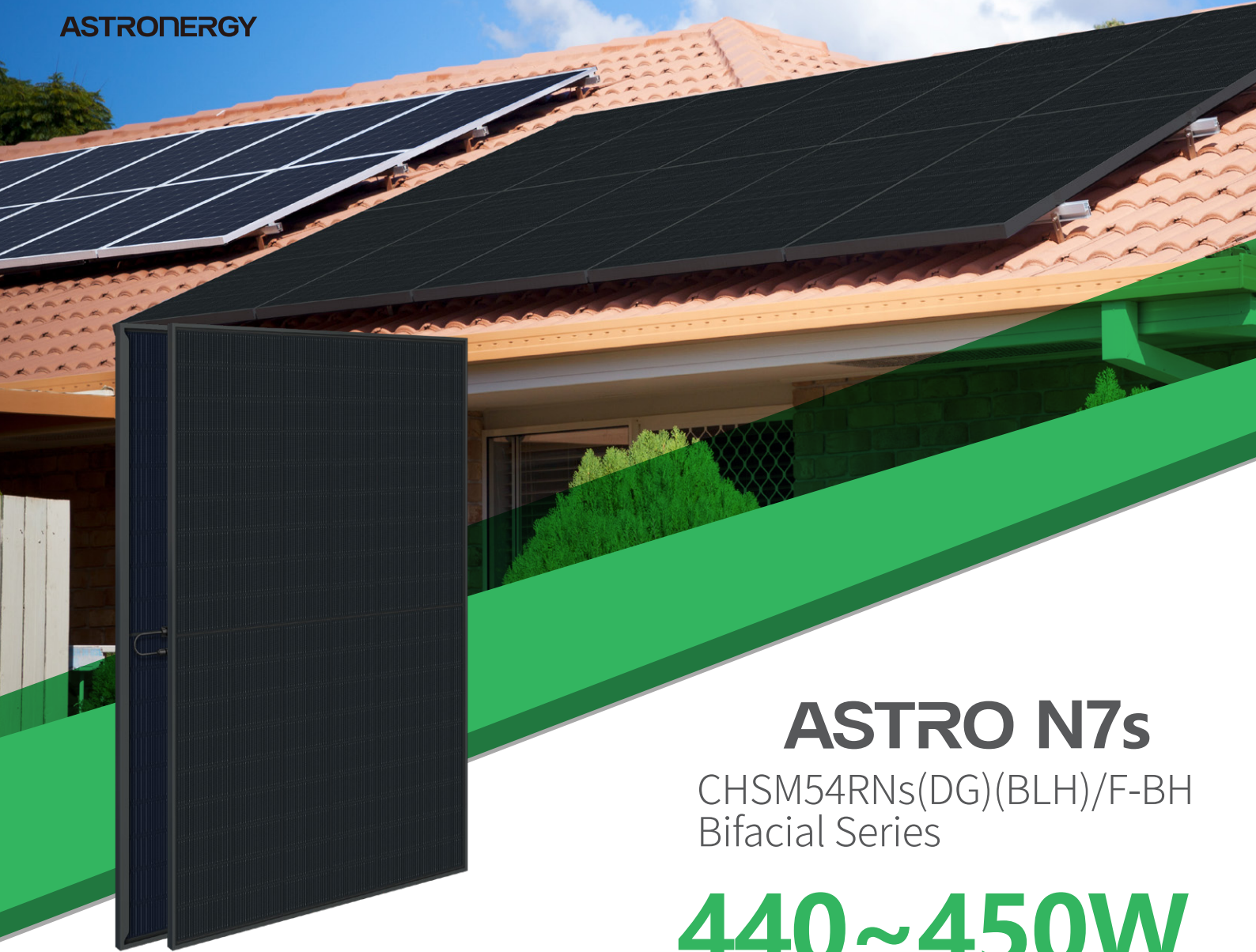




ASTRONERGY



ASTRO N7s

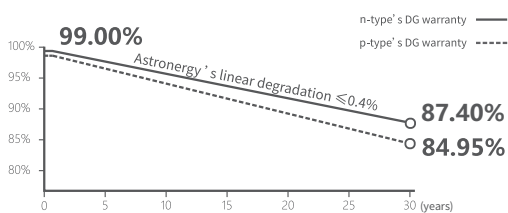
CHSM54RNs(DG)(BLH)/F-BH
Bifacial Series

440~450W

Warranty

30 30-year Product Warranty
(special for rooftop market)

30 30-year Linear Power Warranty



Key Features

- ZBB design , elegant appearance
- Suitable for distributed projects
- High power
- High reliability
- 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

TOP PERFORMER
member of group
PVELkiwa

Tier 1
BloombergNEF



440~450W

POWER RANGE

0~+3%

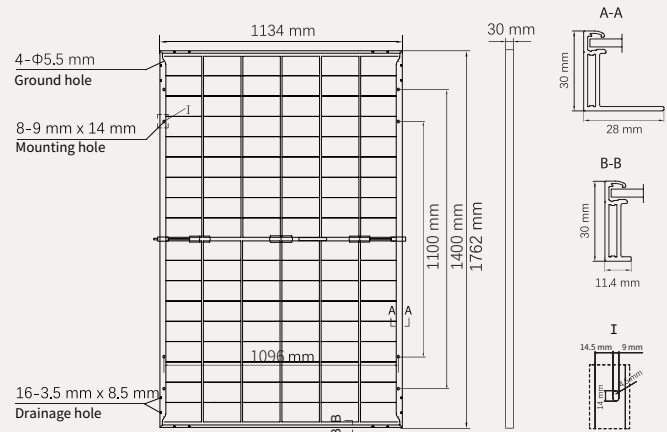
POWER SORTING

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)	1762 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)	PV-HCB40 (Astronergy) or PV-KST4-EVO2A/ xy, PV-KBT4-EVO2A/xy (Stäubli)
Module weight	21.5 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	819 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 CHSM54RN5(DG)(BLH)/F-BH-XXX(XXX=440-450)

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

Rated output (P _{mpp} / Wp)	440	445	450
Rated voltage (V _{mpp} / V)	33.05	33.22	33.39
Rated current (I _{mpp} / A)	13.31	13.40	13.48
Open circuit voltage (V _{oc} / V)	39.00	39.20	39.40
Short circuit current (I _{sc} / A)	14.10	14.19	14.28
Module efficiency	22.0%	22.3%	22.5%

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

Rated output (P _{mpp} / Wp)	330.9	334.6	338.4
Rated voltage (V _{mpp} / V)	31.11	31.27	31.43
Rated current (I _{mpp} / A)	10.64	10.70	10.77
Open circuit voltage (V _{oc} / V)	37.04	37.23	37.42
Short circuit current (I _{sc} / A)	11.38	11.46	11.53

Refer to the installation manual for BNPI electrical ratings and bifaciality coefficients for V_{oc}, I_{sc}, and P_{max}.
Power tolerance: +/- 3.5%

Electrical Specifications (Integrated power)

P _{mpp} gain	P _{mpp} / Wp	V _{mpp} / V	I _{mpp} / A	V _{oc} / V	I _{sc} / A
5%	462	33.05	13.98	39.00	14.81
10%	484	33.05	14.64	39.00	15.51
15%	506	33.05	15.31	39.00	16.22
20%	528	33.05	15.98	39.00	16.92
25%	550	33.05	16.64	39.00	17.63

Electrical characteristics with different rear power gain (reference to 440W)

Temperature Ratings (STC) Operating Parameters

Temperature coefficient (P _{mpp})	-0.29%/°C	No. of diodes	3
Temperature coefficient (I _{sc})	+0.043%/°C	Junction box IP rating	IP 68
Temperature coefficient (V _{oc})	-0.25%/°C	Max. series fuse rating	30 A
Nominal module operating temperature (NMOT)	41±2° C	Max. system voltage (IEC/UL)	1500V _{DC}

Fire performance: Class A

Made in China, Made in Thailand.

© Chint New Energy Technology Co., Ltd. Reserves the right of final interpretation. please contact our company to use the latest version for contract.

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

Curve

