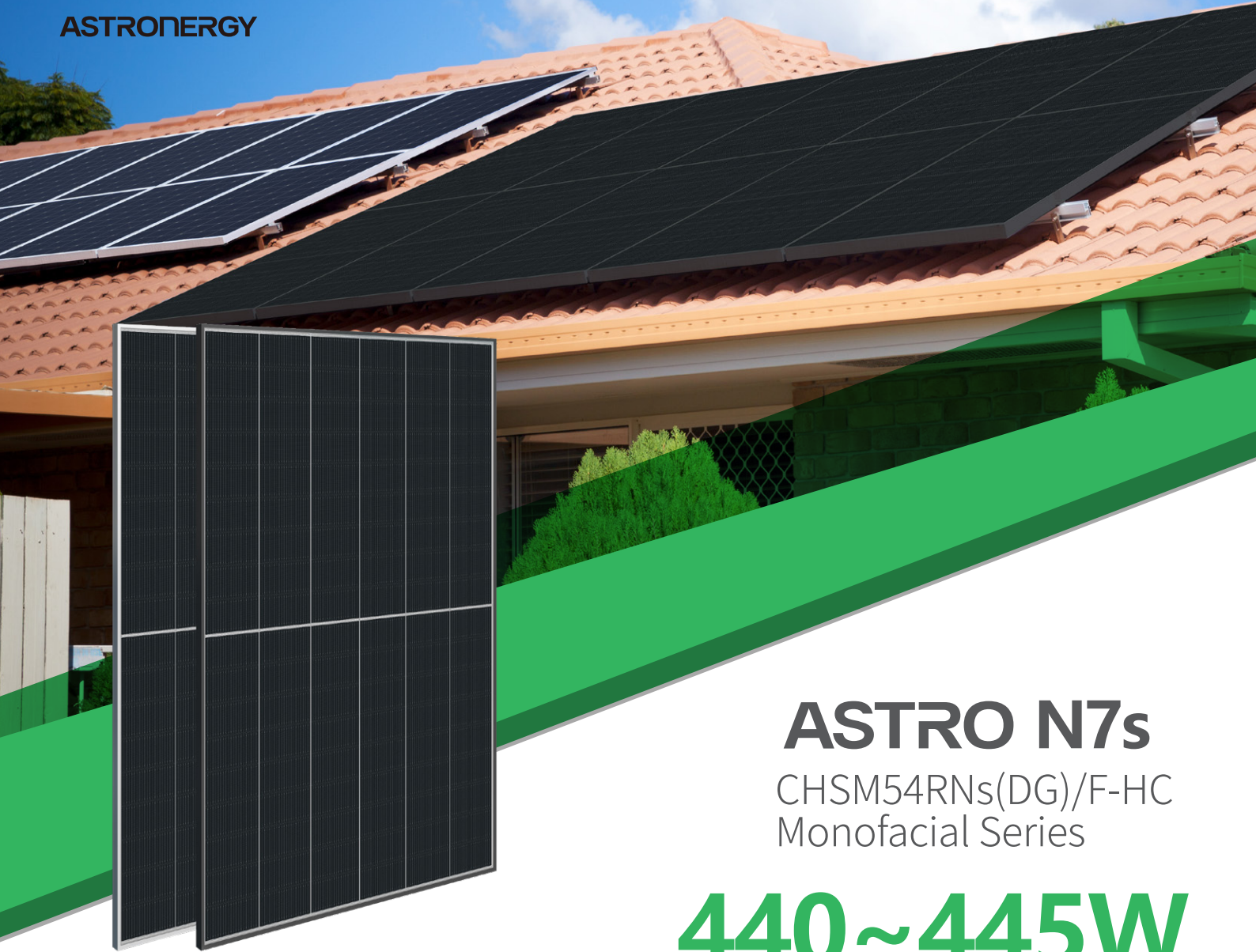




ASTRONERGY



# ASTRO N7s

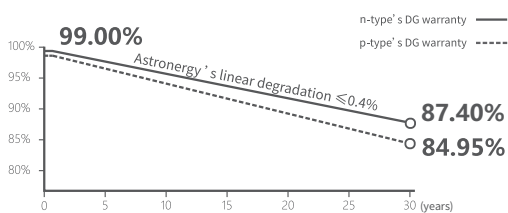
CHSM54RN<sub>s</sub>(DG)/F-HC  
Monofacial Series

# 440~445W

## 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

Underwritten by  
International Insurer



**440~445W**

POWER RANGE

**0~+3%**

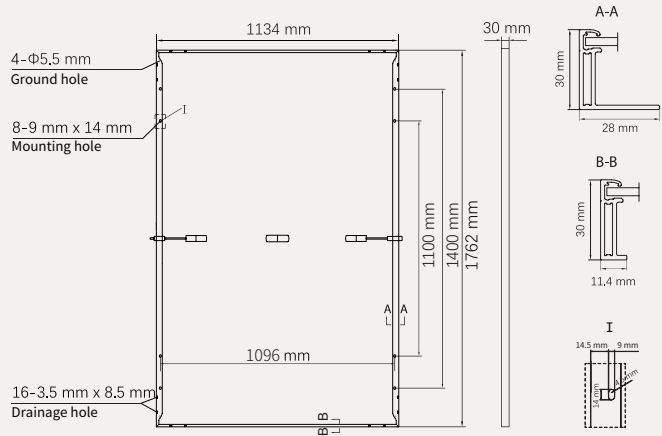
POWER SORTING

**22.3%**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)	1762 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	108 (6*18)
Frame technology	Aluminum, silver or black anodized
Front glass thickness	1.6+1.6 mm
Cable length (Including connector)	Portrait: (+)350 mm, (-)250 mm; Customized length
Cable diameter (IEC/UL)	4 mm <sup>2</sup> / 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 CHSM54RNs(DG)/F-BH-XXX(XXX=440-445)

**STC:** Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	440	445
Rated voltage (Vmpp / V)	32.61	32.77
Rated current (Impp / A)	13.49	13.58
Open circuit voltage (Voc / V)	38.80	39.00
Short circuit current (Isc / A)	14.18	14.26
Module efficiency	22.0%	22.3%

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

Rated output (Pmpp / Wp)	330.9	334.6
Rated voltage (Vmpp / V)	30.69	30.85
Rated current (Impp / A)	10.78	10.85
Open circuit voltage (Voc / V)	36.85	37.04
Short circuit current (Isc / A)	11.44	11.51

Power tolerance: +/- 3.5%

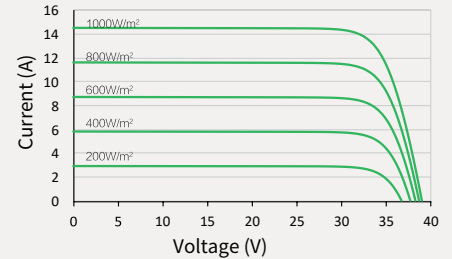
## Temperature Ratings (STC) Operating Parameters

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 <sub>DC</sub>

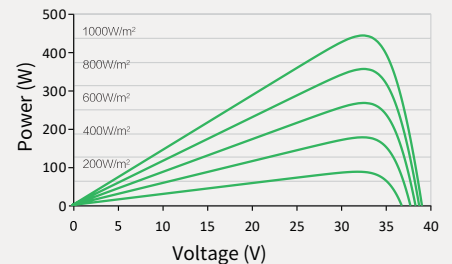
Fire performance: Class A

## Curve

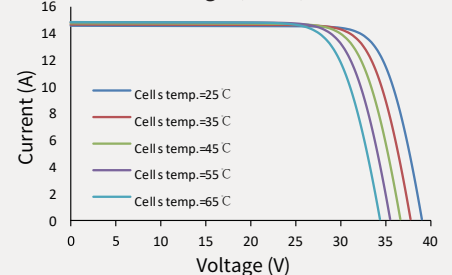
Current-Voltage (445W)



Power-Voltage (445W)



Current-Voltage (445W)



Made in China, Made in Thailand.

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