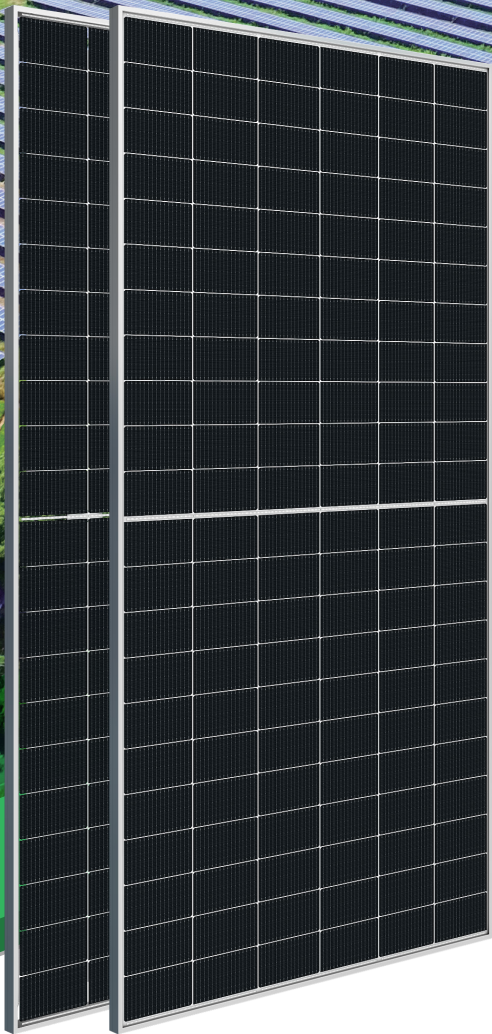
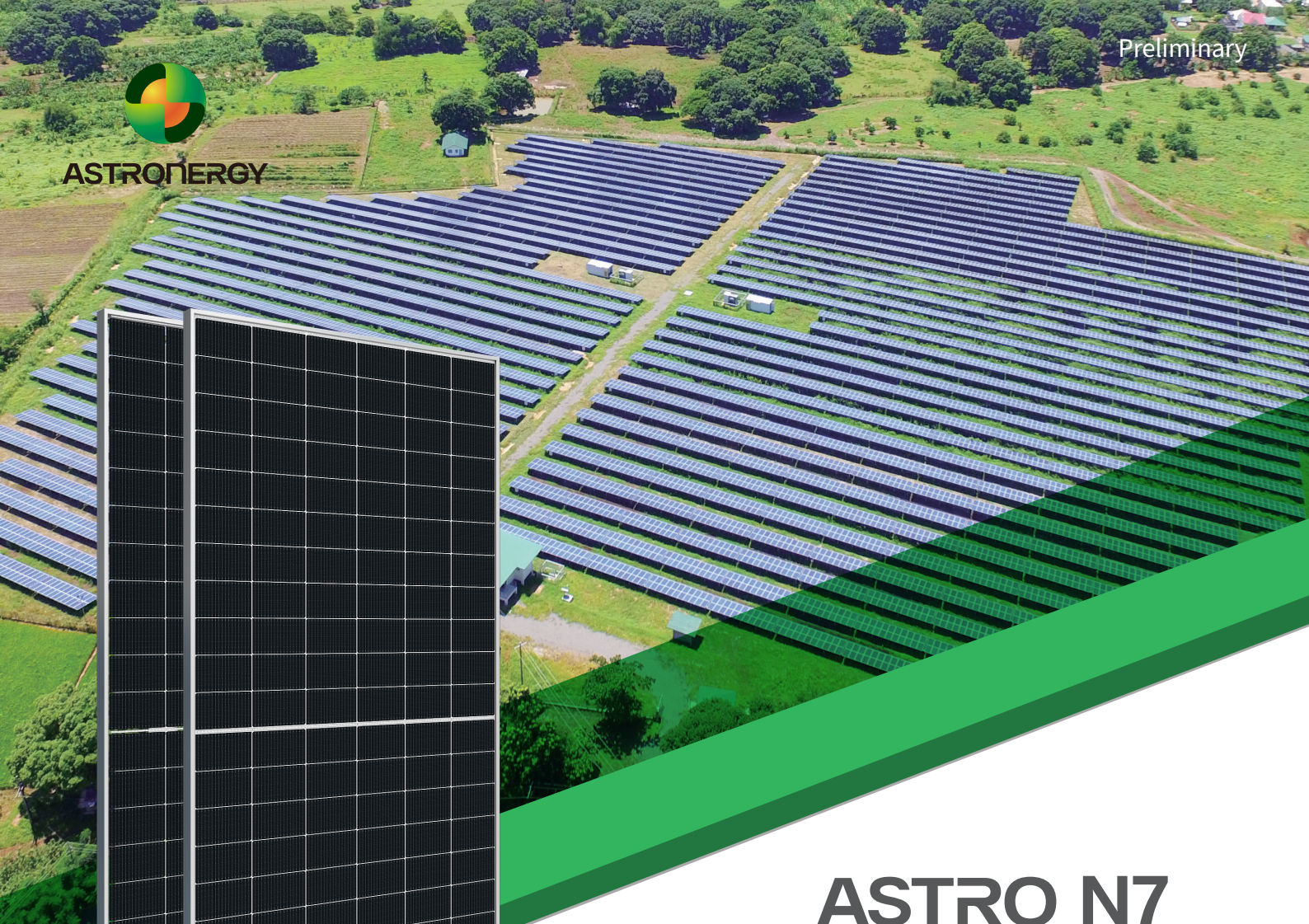




ASTRONERGY



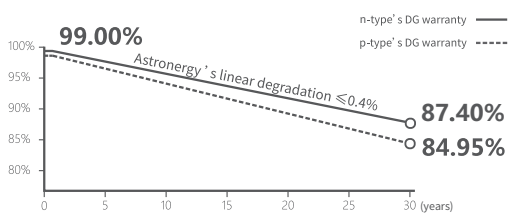
# ASTRO N7

CHSM66RN(DG)/F-BH  
Bifacial Series

# 595~615W

## Warranty

- 15** 15-year Product Warranty
- 30** 30-year Linear Power Warranty



## Key Features

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



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



**595~615W**

POWER RANGE

**0~+3%**

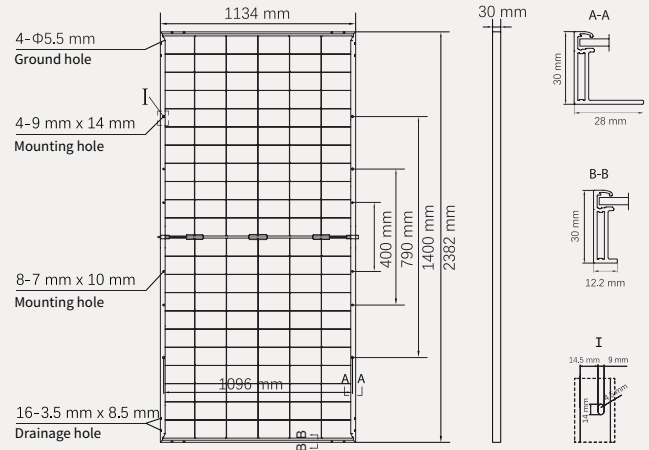
POWER SORTING

**22.8%**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)	2382 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	132 (6*22)
Frame technology	Aluminum, silver anodized
Front / Back glass	2.0+2.0 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)	HCB40 (Standard) / MC4-EVO2A (Optional)
Module weight	33.5 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1268 kg
Modules per 40' HQ container	720 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<sup>2</sup>, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	595	600	605	610	615
Rated voltage (Vmpp / V)	40.92	41.05	41.18	41.31	41.43
Rated current (Impp / A)	14.54	14.62	14.69	14.77	14.84
Open circuit voltage (Voc / V)	48.29	48.44	48.59	48.74	48.89
Short circuit current (Isc / A)	15.70	15.78	15.86	15.94	16.02
Module efficiency	22.0%	22.2%	22.4%	22.6%	22.8%

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

Rated output (Pmpp / Wp)	447.4	451.2	455.0	458.7	462.5
Rated voltage (Vmpp / V)	38.52	38.64	38.76	38.88	39.00
Rated current (Impp / A)	11.62	11.68	11.74	11.80	11.86
Open circuit voltage (Voc / V)	45.87	46.01	46.15	46.30	46.44
Short circuit current (Isc / A)	12.67	12.74	12.80	12.87	12.94

## Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp / A	Voc / V	Isc / A
5%	641	41.56	15.41	49.04	16.64
10%	671	41.64	16.11	49.14	17.18
15%	702	41.73	16.81	49.24	17.92
20%	732	41.81	17.51	49.34	18.66
25%	763	41.90	18.20	49.44	19.40

Electrical characteristics with different rear power gain (reference to 610W)

## 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	35 A
Nominal module operating temperature (NMOT)	41±2° C	Max. system voltage (IEC/UL)	1500V <sub>DC</sub>

## Curve

