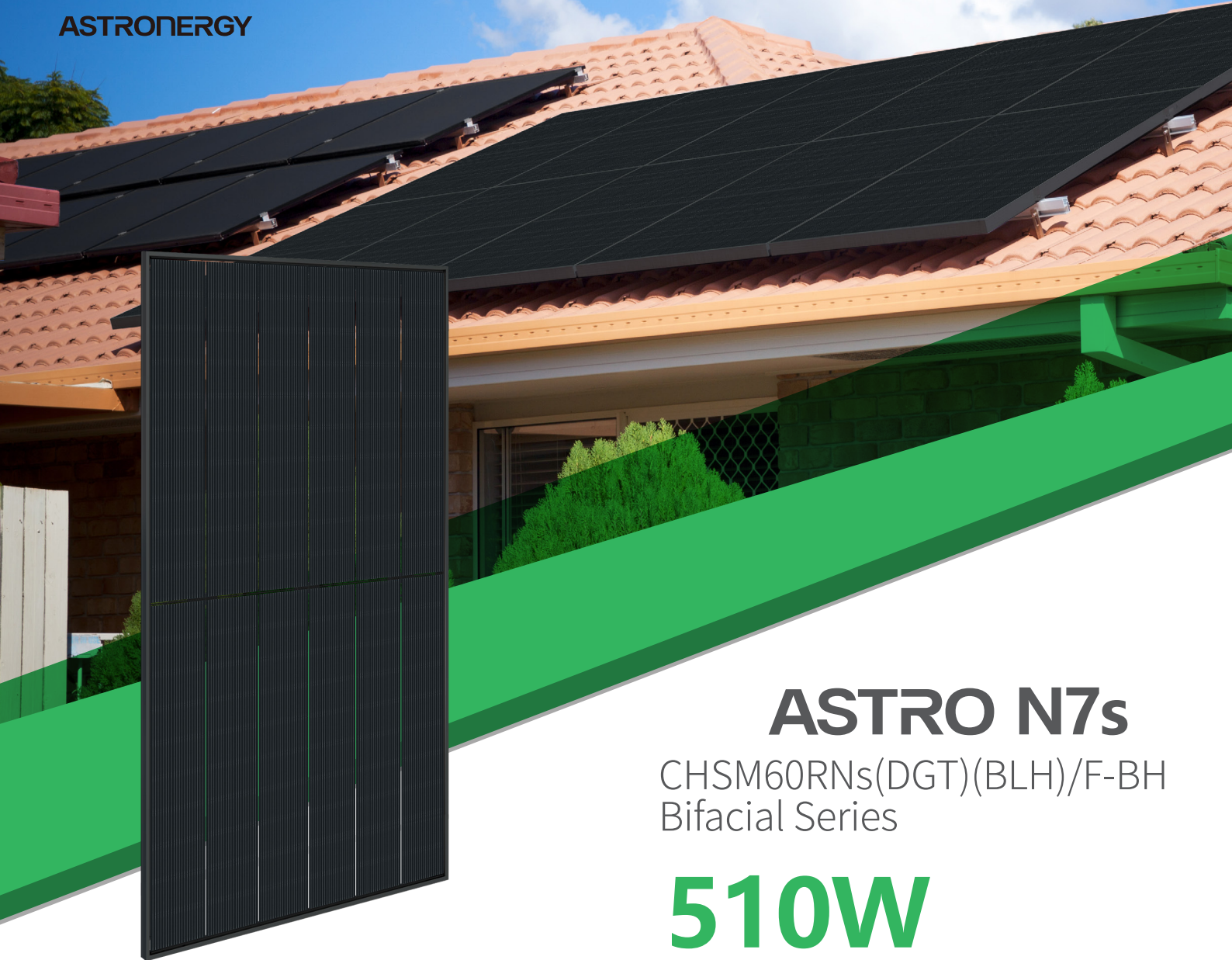




ASTRONERGY

Special for Australian Market  
Preliminary



# ASTRO N7s

CHSM60RNs(DGT)(BLH)/F-BH  
Bifacial Series

# 510W

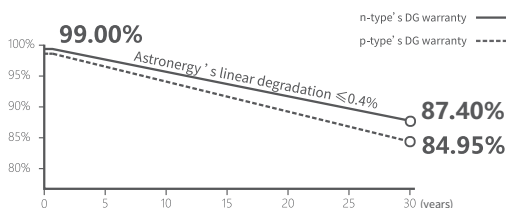
## Warranty

30

30-year Product Warranty  
(Specified for rooftop market)

30

30-year Linear Power Warranty  
(Only to the front-side of modules)



## Key Features

- High efficiency n-type TOPCon cells
- Elegant Zero Busbar design
- Dual glass for improved durability
- Manufacturing with AI technology
- Suitable for residential systems
- Easy to install and transport



ISO 9001:2015:ISO Quality Management System  
ISO 14001:2015:ISO Environment Management System  
ISO 45001:Occupational Health and Safety



Tier 1  
BloombergNEF



**510W**

POWER RANGE

**±5W**

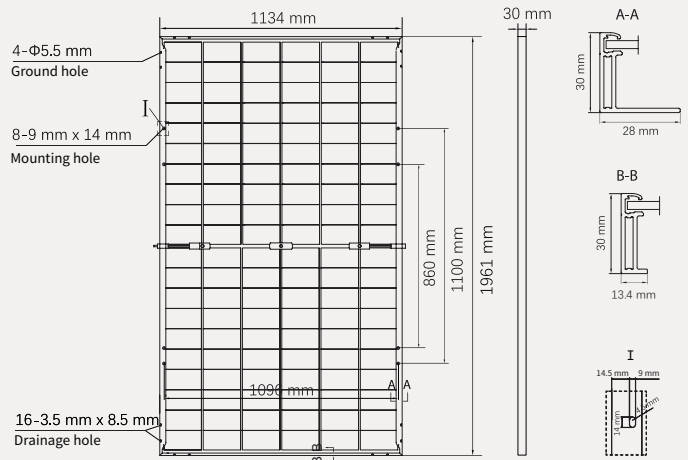
POWER SORTING

**22.9%**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)                 | 1961 x 1134 x 30 mm                                                        |
| Cell type                                    | n-type mono-crystalline                                                    |
| No. of cells                                 | 120 (6*20)                                                                 |
| Frame technology                             | Aluminum, black anodized                                                   |
| Front / Back glass                           | 2.0+2.0 mm                                                                 |
| Cable length (Including connector)           | Portrait: ( + )350 mm,( - )250 mm;<br>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 (Chint New Energy) or PV-KST4-EVO2A/xy,PV-KBT4-EVO2A/xy (Stäubli) |
| Module weight                                | 27.4 kg                                                                    |
| Packing unit                                 | 36 pcs / box                                                               |
| Weight of packing unit (for 40'HQ container) | 1053 kg                                                                    |
| Modules per 40' HQ container                 | 864 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 CHSM60RNs(DGT)(BLH)/F-BH-XXX(XXX=510)

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

|                                                   |       |
|---------------------------------------------------|-------|
| Rated output (P <sub>mpp</sub> / W <sub>p</sub> ) | 510   |
| Rated voltage (V <sub>mpp</sub> / V)              | 36.83 |
| Rated current (I <sub>mpp</sub> / A)              | 13.85 |
| Open circuit voltage (V <sub>oc</sub> / V)        | 44.38 |
| Short circuit current (I <sub>sc</sub> / A)       | 14.54 |
| Module efficiency                                 | 22.9% |

Tolerance: P<sub>mpp</sub> ±3%, V<sub>oc</sub> ±3% and I<sub>sc</sub> ±4%.

**BNPI:** Irradiance: front 1000W/m<sup>2</sup>, rear 135W/m<sup>2</sup>, Cell Temperature 25° C, AM=1.5

|                                                   |       |
|---------------------------------------------------|-------|
| Rated output (P <sub>mpp</sub> / W <sub>p</sub> ) | 560   |
| Rated voltage (V <sub>mpp</sub> / V)              | 36.96 |
| Rated current (I <sub>mpp</sub> / A)              | 15.15 |
| Open circuit voltage (V <sub>oc</sub> / V)        | 44.60 |
| Short circuit current (I <sub>sc</sub> / A)       | 15.89 |

Bifaciality(P<sub>mpp</sub>/I<sub>sc</sub>) : 80±5 %, Bifaciality(V<sub>oc</sub>) : 98±2 %

### Electrical characteristics with 10% Bifacial Gains

|                                                   |       |
|---------------------------------------------------|-------|
| Rated output (P <sub>mpp</sub> / W <sub>p</sub> ) | 561   |
| Rated voltage (V <sub>mpp</sub> / V)              | 36.83 |
| Rated current (I <sub>mpp</sub> / A)              | 15.23 |
| Open circuit voltage (V <sub>oc</sub> / V)        | 44.39 |
| Short circuit current (I <sub>sc</sub> / A)       | 16.00 |

## Operating Parameters

|                              |                     |
|------------------------------|---------------------|
| No. of diodes                | 3                   |
| Junction box IP rating       | IP 68               |
| Max. series fuse rating      | 30 A                |
| Max. system voltage (IEC/UL) | 1500V <sub>DC</sub> |

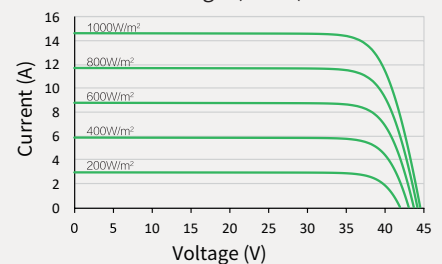
Fire performance: Class C

## Temperature Ratings (STC)

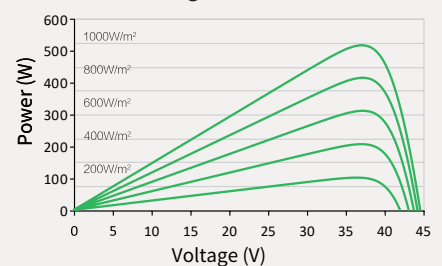
|                                             |            |
|---------------------------------------------|------------|
| Temperature coefficient (P <sub>mpp</sub> ) | -0.29%/°C  |
| Temperature coefficient (I <sub>sc</sub> )  | +0.043%/°C |
| Temperature coefficient (V <sub>oc</sub> )  | -0.25%/°C  |

## Curve

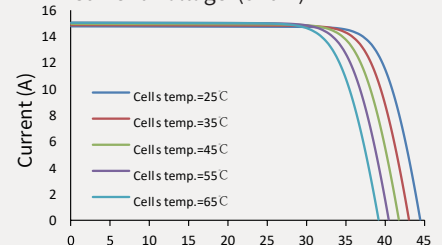
Current-Voltage (510W)



Power-Voltage (510W)



Current-Voltage (510W)



Made in China, Made in Turkey.

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