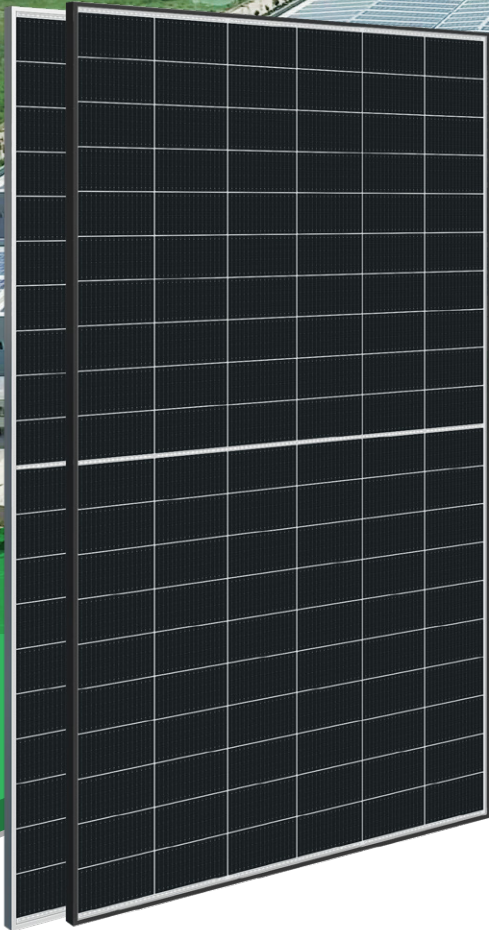
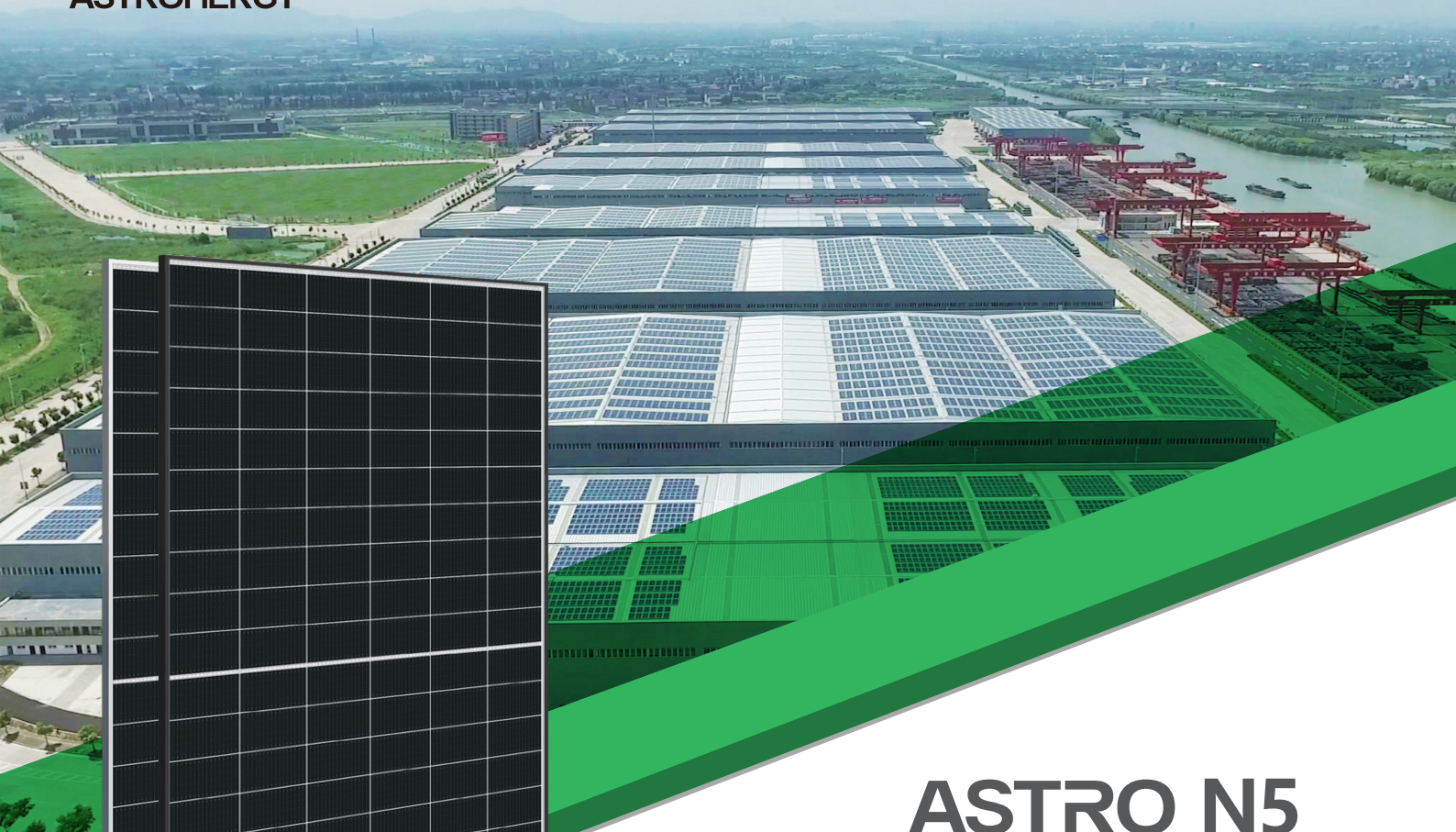




ASTRONERGY



ASTRO N5

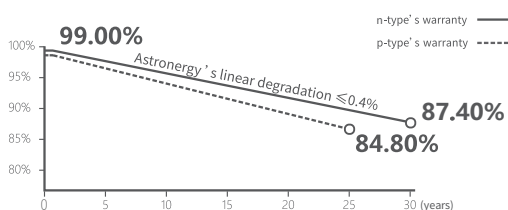
CHSM60N(DG)/F-HC
Monofacial Series

475~480W

Warranty

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

30 30-year Linear Power Warranty



Key Features

- TOPCon / Half-cut
- Better temperature coefficient (Pmpp)
- Non-destructive cutting



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



Tier 1
BloombergNEF



475~480W

POWER RANGE

0~+3%

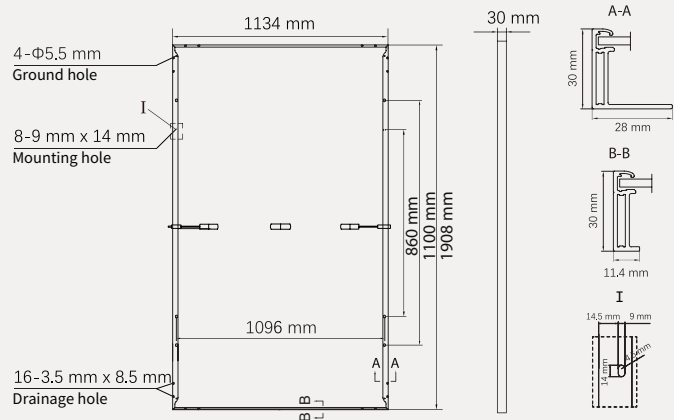
POWER SORTING

22.2%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) | 1908 x 1134 x 30 mm |
| Cell type | n type mono-crystalline |
| No. of cells | 120 (6*20) |
| Frame technology | Aluminum, black or silver 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 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 | 23 kg |
| Packing unit | 36 pcs / box |
| Weight of packing unit (for 40'HQ container) | 875 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 CHSM60N(DG)/F-HC-XXX(XXX=475-480)

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

| | | |
|---------------------------------|-------|-------|
| Rated output (Pmpp / Wp) | 475 | 480 |
| Rated voltage (Vmpp / V) | 36.39 | 36.52 |
| Rated current (Impp / A) | 13.05 | 13.14 |
| Open circuit voltage (Voc / V) | 43.31 | 43.46 |
| Short circuit current (Isc / A) | 13.80 | 13.91 |
| Module efficiency | 22.0% | 22.2% |

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

| | | |
|---------------------------------|-------|-------|
| Rated output (Pmpp / Wp) | 357.2 | 361.0 |
| Rated voltage (Vmpp / V) | 34.26 | 34.37 |
| Rated current (Impp / A) | 10.43 | 10.50 |
| Open circuit voltage (Voc / V) | 41.14 | 41.28 |
| Short circuit current (Isc / A) | 11.14 | 11.23 |

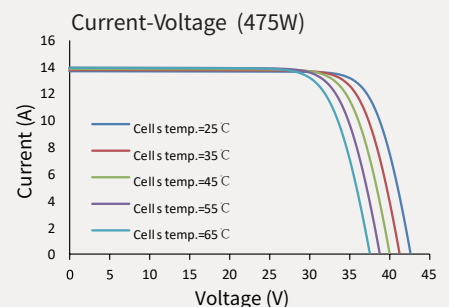
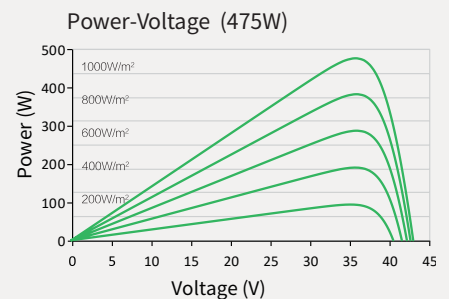
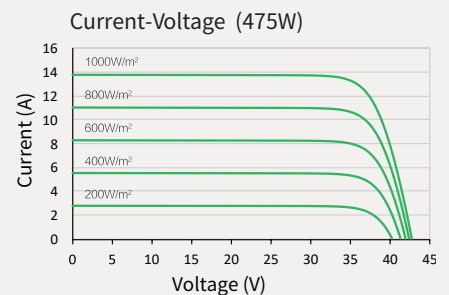
Power tolerance: +/- 3.5%

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 _{DC} |

Fire performance: Class A

Curve



Made in China, Made in Thailand.

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

202403