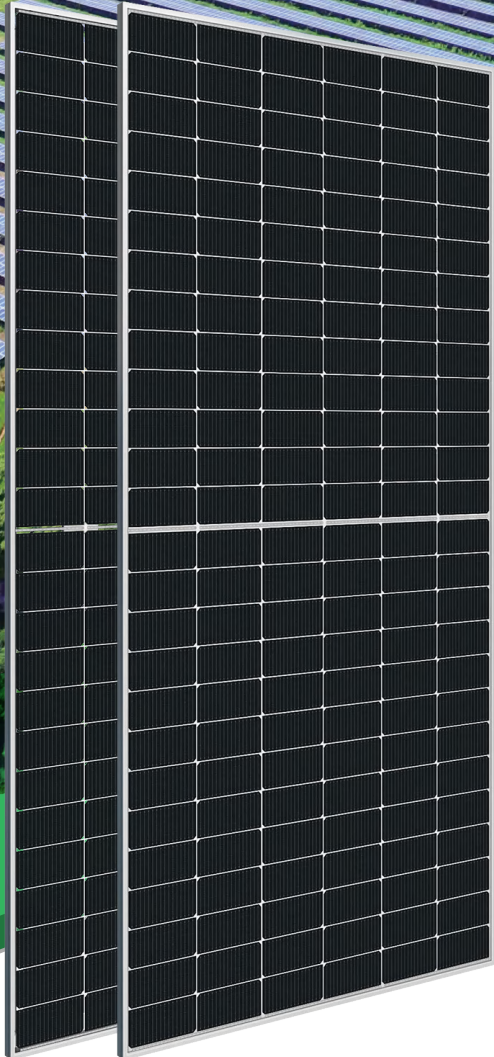
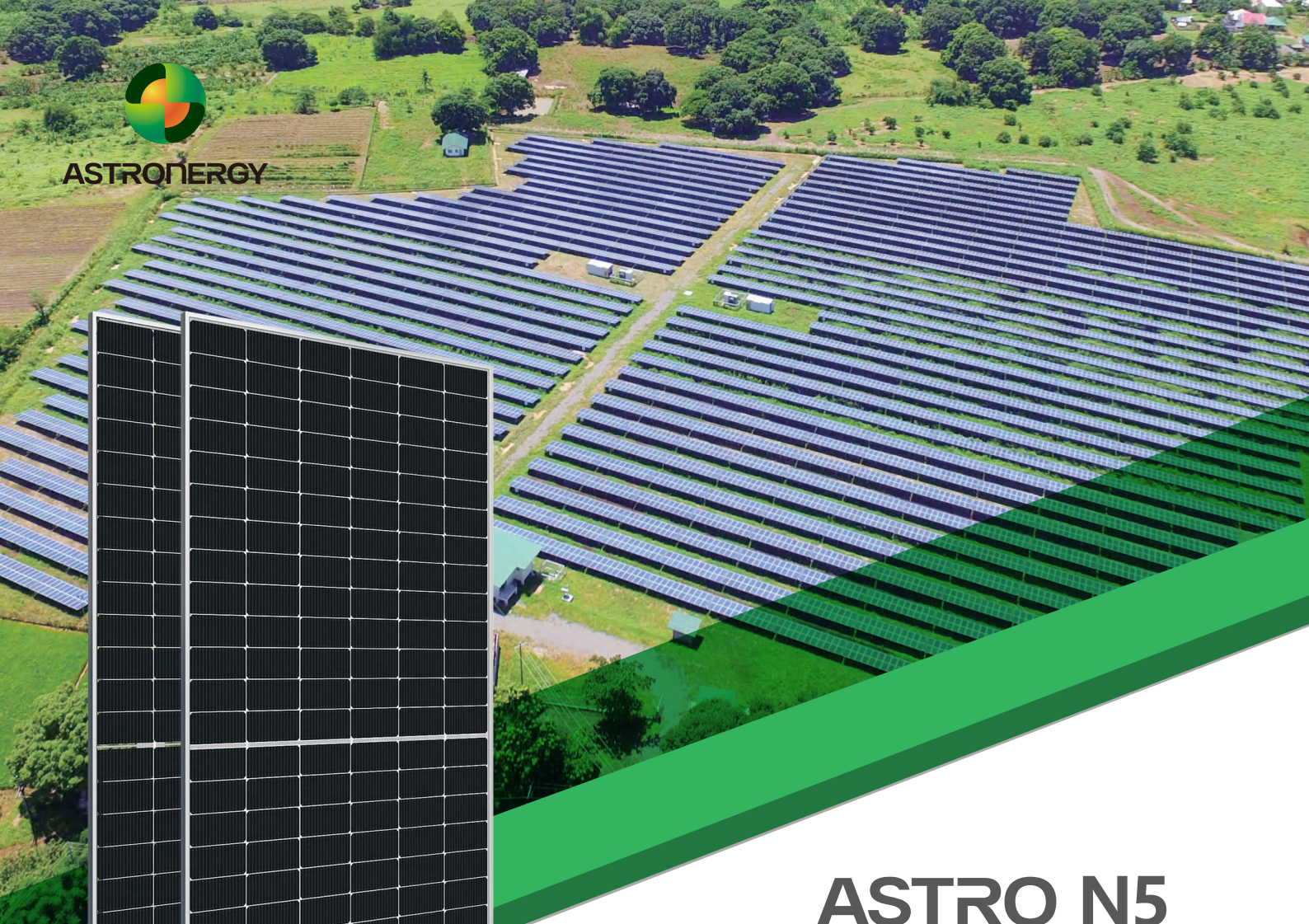




ASTRONERGY



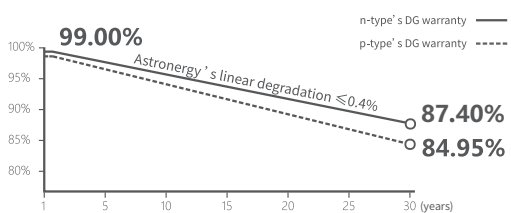
ASTRO N5

CHSM78N(DG)/F-BH
Bifacial Series(182)

605~630W

Warranty

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



Key Features

- TOPCon / Half-cut
- Low 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



605~630W

POWER RANGE

0~+5W

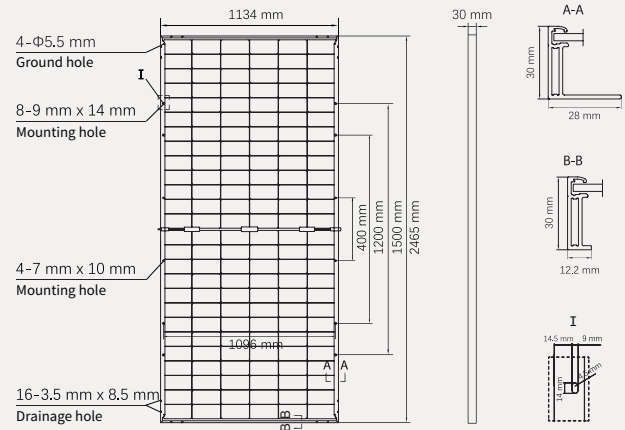
POWER SORTING

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) | 2465 x 1134 x 30 mm |
| Cell type | n-type mono-crystalline |
| No. of cells | 156 (6*26) |
| 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 ² / 12 AWG |
| ① Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Connector type (IEC/UL) | HCB40 (Standard) / MC4-EVO2A (Optional) |
| Module weight | 34.7 kg |
| Packing unit | 36 pcs / box (Subject to sales contract) |
| Weight of packing unit (for 40'HQ container) | 1304 kg |
| Modules per 40' HQ container | 576 pcs |

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/m², Cell Temperature 25° C, AM=1.5

| Rated output (Pmpp / Wp) | 605 | 610 | 615 | 620 | 625 | 630 |
|---------------------------------|-------|-------|-------|-------|-------|-------|
| Rated voltage (Vmpp / V) | 45.63 | 45.79 | 45.96 | 46.12 | 46.29 | 46.45 |
| Rated current (Impp / A) | 13.26 | 13.32 | 13.38 | 13.44 | 13.50 | 13.56 |
| Open circuit voltage (Voc / V) | 55.21 | 55.41 | 55.61 | 55.81 | 56.01 | 56.21 |
| Short circuit current (Isc / A) | 13.78 | 13.87 | 13.95 | 14.03 | 14.11 | 14.19 |
| Module efficiency | 21.6% | 21.8% | 22.0% | 22.2% | 22.4% | 22.5% |

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

| Rated output (Pmpp / Wp) | 455.0 | 458.7 | 462.5 | 466.2 | 470.0 | 473.8 |
|---------------------------------|-------|-------|-------|-------|-------|-------|
| Rated voltage (Vmpp / V) | 42.95 | 43.10 | 43.26 | 43.41 | 43.57 | 43.73 |
| Rated current (Impp / A) | 10.59 | 10.64 | 10.69 | 10.74 | 10.79 | 10.83 |
| Open circuit voltage (Voc / V) | 52.44 | 52.63 | 52.82 | 53.01 | 53.20 | 53.39 |
| Short circuit current (Isc / A) | 11.13 | 11.19 | 11.26 | 11.32 | 11.39 | 11.45 |

Electrical Specifications (Integrated power)

| Pmpp gain | Pmpp / Wp | Vmpp / V | Impp / A | Voc / V | Isc / A |
|-----------|-----------|----------|----------|---------|---------|
| 5% | 651 | 46.12 | 14.11 | 55.81 | 14.73 |
| 10% | 682 | 46.12 | 14.79 | 55.81 | 15.43 |
| 15% | 713 | 46.13 | 15.45 | 55.82 | 16.13 |
| 20% | 744 | 46.13 | 16.13 | 55.82 | 16.83 |
| 25% | 775 | 46.13 | 16.80 | 55.83 | 17.53 |

Electrical characteristics with different rear power gain (reference to 620W)

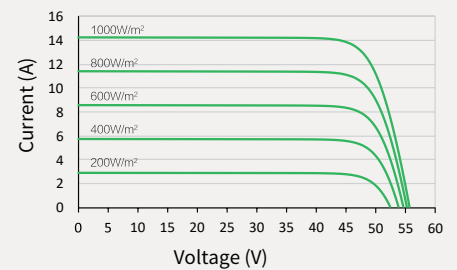
Temperature Ratings (STC)

Operating Parameters

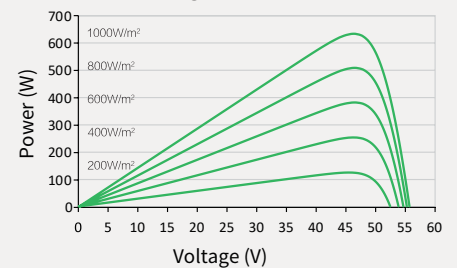
| | | | |
|---|------------|------------------------------|---------------------|
| Temperature coefficient (Pmpp) | -0.29%/°C | No. of diodes | 3 |
| Temperature coefficient (Isc) | +0.043%/°C | Junction box IP rating | IP 68 |
| Temperature coefficient (Voc) | -0.25%/°C | Max. series fuse rating |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

Curve

Current-Voltage (620W)



Power-Voltage (620W)



Current-Voltage (620W)

