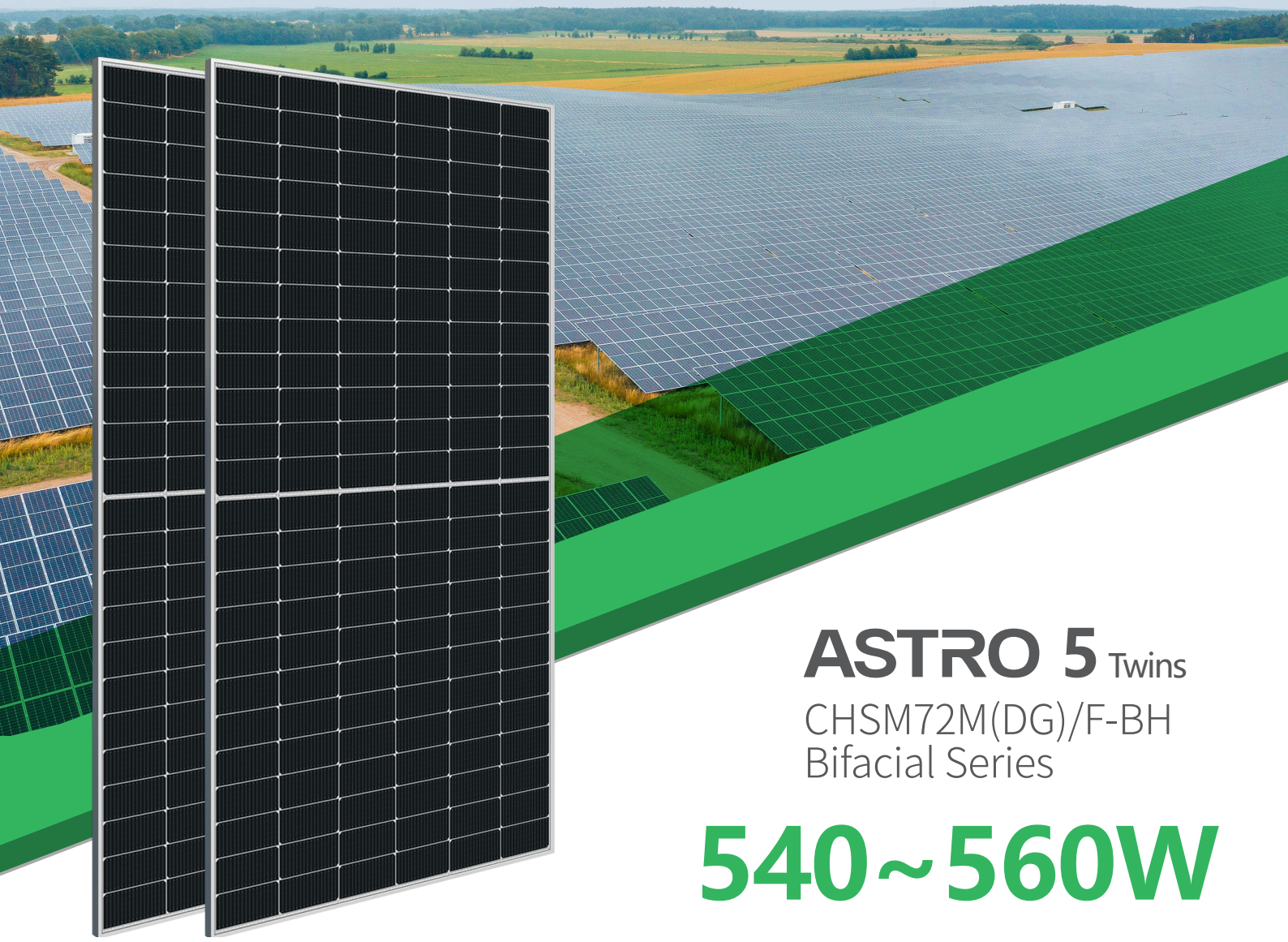
ASTRONERGY



ASTRO 5 Twins

CHSM72M(DG)/F-BH
Bifacial Series

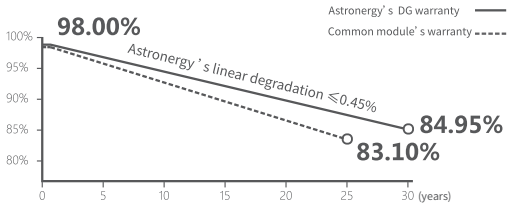
540~560W

Assist carbon neutrality CO_2

Warranty

15 15-year Product Warranty

30 30-year Linear Power Warranty



PERC+ Technology
Upgraded PERC, empowering PV module

SMBB Design
Enhancing current collection, minimizing power loss

Bifacial Power Generation
Maximizing bifaciality, boosting backside power output

Non-destructive cutting
Improved cell bending strength, ensuring mechanical performance

IEC 61215, IEC 61730
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

TOP PERFORMER 2024 kiwa PVEL PV MODULE RELIABILITY SCORECARD

Tier 1 BloombergNEF

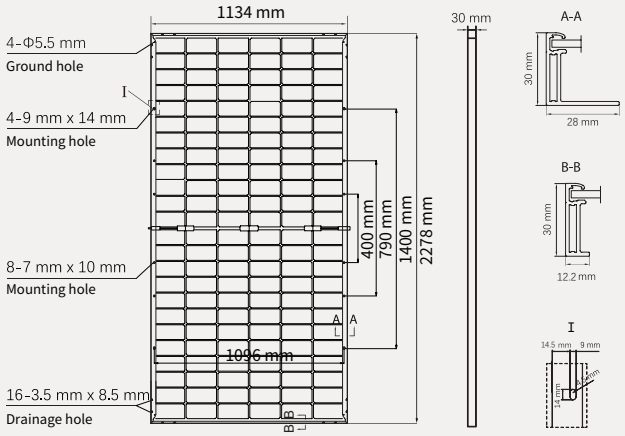
Underwritten by International Insurer

540~560W	0~+3%	21.7%	≤ 2.0%	≤ 0.45%
POWER RANGE	POWER SORTING	MAX MODULE EFFICIENCY	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION

Mechanical Specifications

Outer dimensions (L x W x H)	2278 x 1134 x 30 mm
Cell type	P type mono-crystalline
No. of cells	144 (6*24)
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	32.1 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1207 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^2, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	540	545	550	555	560
Rated voltage (Vmpp / V)	41.93	42.10	42.27	42.44	42.61
Rated current (Impp / A)	12.88	12.95	13.01	13.08	13.14
Open circuit voltage (Voc / V)	49.90	50.10	50.30	50.50	50.70
Short circuit current (Isc / A)	13.66	13.75	13.84	13.89	13.98
Module efficiency	20.9%	21.1%	21.3%	21.5%	21.7%

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

Rated output (Pmpp / Wp)	403.5	407.3	411.0	414.8	418.5
Rated voltage (Vmpp / V)	39.08	39.24	39.39	39.55	39.71
Rated current (Impp / A)	10.33	10.38	10.43	10.49	10.54
Open circuit voltage (Voc / V)	47.16	47.34	47.53	47.72	47.91
Short circuit current (Isc / A)	11.08	11.16	11.23	11.30	11.37

Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp / A	Voc / V	Isc / A
5%	578	42.27	13.66	50.30	14.53
10%	605	42.27	14.31	50.30	15.22
15%	633	42.27	14.96	50.30	15.92
20%	660	42.27	15.61	50.30	16.61
25%	688	42.27	16.26	50.30	17.30

Electrical characteristics with different rear power gain (reference to 550W)

Temperature Ratings (STC)

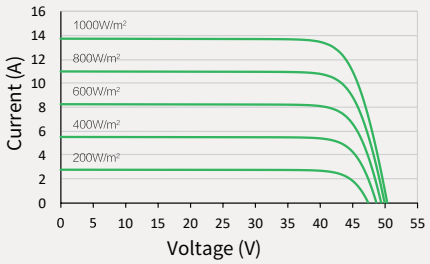
Temperature coefficient (Pmpp)	-0.34%/°C
Temperature coefficient (Isc)	+0.04%/°C
Temperature coefficient (Voc)	-0.25%/°C
Nominal module operating temperature (NMOT)	41±2°C

Operating Parameters

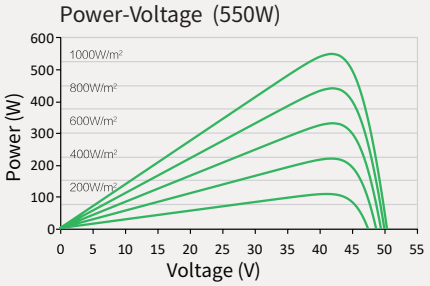
No. of diodes	3
Junction box IP rating	IP 68
Max. series fuse rating	30 A
Max. system voltage (IEC/UL)	1500V_{DC}

Curve

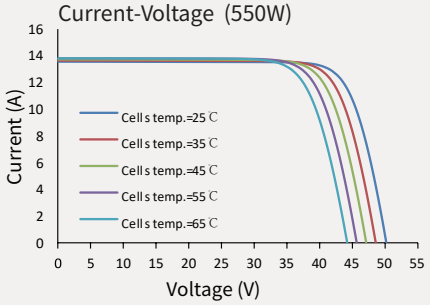
Current-Voltage (550W)



Power-Voltage (550W)



Current-Voltage (550W)



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