



ASTRONERGY
A CHNT COMPANY

ASTRO 6 Twins

Create Sustainable and Efficient Green Energy

CHSM66M(DG)/F-BH
Bifacial Series (210)

645~660W

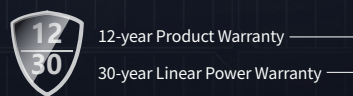
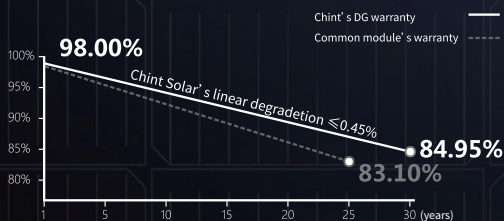
PERC+ / Multi-busbar / Half-cut

Non-destructive cutting

PID resistance

Bifacial gain

Lower BOS cost & LCOE



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



645~660W

POWER RANGE

0~+5W

POWER TOLERANCE

21.2%

MAX MODULE EFFICIENCY

≤ 2.0%

FIRST YEAR POWER DEGRADATION

≤ 0.45%

YEAR 2-30 POWER DEGRADATION

Electrical Specifications

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

Rated output (Pmpp / Wp)	645	650	655	660
Rated voltage (Vmpp / V)	37.48	37.68	37.88	38.08
Rated current (Impp / A)	17.21	17.26	17.30	17.34
Open circuit voltage (Voc / V)	45.29	45.49	45.69	45.89
Short circuit current (Isc / A)	18.27	18.32	18.37	18.42
Module efficiency	20.8%	20.9%	21.1%	21.2%

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

Rated output (Pmpp / Wp)	485.8	489.5	493.3	497.1
Rated voltage (Vmpp / V)	35.03	35.19	35.34	35.47
Rated current (Impp / A)	13.87	13.92	13.97	14.02
Open circuit voltage (Voc / V)	42.43	42.63	42.83	43.03
Short circuit current (Isc / A)	14.72	14.77	14.82	14.87

Electrical Specifications (Integrated power)

Pmpp gain	Pmpp / Wp	Vmpp / V	Impp / A	Voc / V	Isc / A
5%	687	37.88	18.17	45.69	19.29
10%	720	37.88	19.03	45.69	20.21
15%	753	37.89	19.90	45.70	21.13
20%	786	37.89	20.76	45.70	22.04
25%	818	37.89	21.63	45.70	22.96

Electrical characteristics with different rear power gain (reference to 655W)

Temperature Ratings (STC)

Temperature coefficient (Pmpp)	-0.34%/°C	No. of diodes	3
Temperature coefficient (Isc)	+0.04%/°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 _{DC}

Operating Parameters

Mechanical Specifications

Outer dimensions (L x W x H)	2384 x 1303 x 35 mm
Cell Type	P type Mono-crystalline
No. of cells	132 (6*22)
Frame technology	Aluminum, silver anodized
Front glass thickness	2.0 mm
Cable length (IEC/UL)	Portrait: 350 mm; Landscape: 1400 mm
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 / MC4-EVO2 (optional)
Module weight	38.2 kg
Packing unit	31 pcs / box (Subject to sales contract)
Weight of packing unit (for 40' HQ container)	1230 kg
Modules per 40' HQ container	527 pcs

^① Refer to Astronergy crystalline installation manual or contact technical department. Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

Curve

