

High Efficiency
Bifacial HJT Module

GSM- MH3/120- BHDG650

630W | 635W | 640W
645W | 650W



650W
Maximum Power Output

85%
Bifaciality

22.97%
Maximum Efficiency

30YEAR
Linear Power Warranty

Product Features



Industry-Leading Process Technology

Advanced HJT cell/module design, higher reliability and outstanding performance



High Energy Yield

Maximum Module Efficiency up to 22.97% achieved by mature mass production HJT cell technology



G12 Cell / Module

G12 Big size wafer, effectively reduced LCOE and improved ROI



High Reliability

Certified mechanical performance up to 5400 Pa positive load and 2400 Pa negative load, with better protection against harsh weather



Higher Performance

Excellent weak light performance and lower temperature coefficient, resulting in better energy yield in all-weather



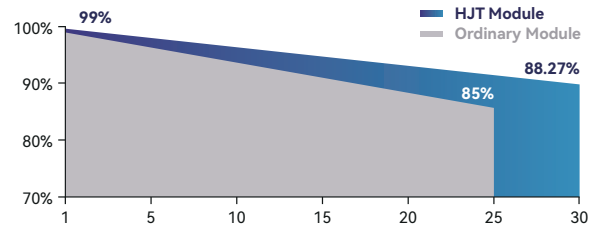
Better Warranty

Extremely low LID/PID in longer service life, 11.73% Power degradation in 30 years

Quality Assurance

15 Years Product Warranty

30 Years Linear Power Warranty



Certificates



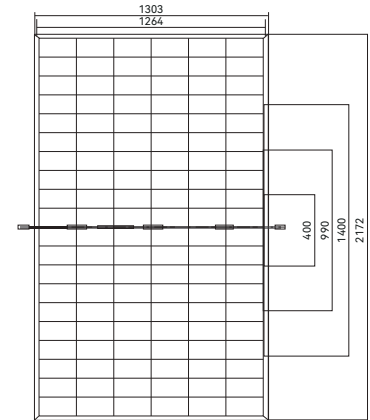
Guosheng Energy Co., Ltd.

Web: www.grandsunergy.com E-mail: sales@grandsunergy.com

Add: West Side to Zhongjing 7th Road, South Side to Pengcheng Boulevard, Xuzhou Industrial Park, Xuzhou City, Jiangsu Province

Mechanical Data

Cell (mm)	210×105
Weight (kg)	35±0.5kg
Dimension(L×W×H)(mm)	2172×1303×33mm
Cable (mm)	4mm ² , 300mm(customized length based on needs)
Frame	anodized aluminum 6005-T26
Junction Box	IP68, 1500VDC, 3 Diodes
Packaging Configuration (40'Container;17.5'Trailer)	33 pcs. / pallet; 17pallet / container; 561pcs / container 33 pcs. / pallet; 25pallet / Trailer; 825pcs / Trailer



Electrical Data(STC)

Model	GSM-MH3/120-BHDG630	GSM-MH3/120-BHDG635	GSM-MH3/120-BHDG640	GSM-MH3/120-BHDG645	GSM-MH3/120-BHDG650
Pmax(Wp)	630	635	640	645	650
Voc(V)	45.30	45.48	45.66	45.84	46.02
Isc(A)	17.37	17.43	17.49	17.55	17.61
Vmpp(V)	38.04	38.19	38.35	38.51	38.67
Impp(A)	16.57	16.63	16.69	16.75	16.81
Efficiency	22.26%	21.44%	22.61%	22.79%	22.97%

STC: AM1.5 Irradiance: 1000W/m² Temperature=25°C

Electrical Characteristics(BSTC)

Model	GSM-MH3/120-BHDG630	GSM-MH3/120-BHDG635	GSM-MH3/120-BHDG640	GSM-MH3/120-BHDG645	GSM-MH3/120-BHDG650
Pmax(Wp)	695	700	707	713	718
Voc(V)	45.35	45.53	45.71	45.89	46.07
Isc(A)	19.11	19.17	19.23	19.29	19.35
Vmpp(V)	38.11	38.29	38.47	38.65	38.83
Impp(A)	18.26	18.32	18.38	18.44	18.50
αsc (%/K) : 0.04; βVoc (%/K) : -0.24; γPmp (%/K) : -0.26					

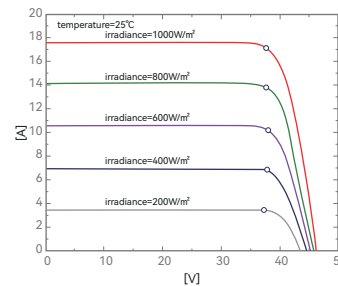
AM1.5, Front irradiance: 1000W/m², Back irradiance: 135W/m², Temperature=25°C, Wind speed=1m/s

Working Condition

Maximum System Voltage	1500VDC
Operating Temperature	-40°C ~ +85°C
Maximum Fuse Rating	35A
Rear Side Mechanical Load	2400Pa
Front Side Mechanical Load	5400Pa
NOCT	44±2°C
Safety Class	Class II
Grounding Electric Conductivity	< 0.1Ω

I-V Diagram

(Different Irradiance)



I-V Diagram

(Different Temperature)

