

High Efficiency
Bifacial HJT Module

GSM- MH5/144- BHDG480

460W | 465W | 470W
475W | 480W



480W
Maximum Power Output

85%
Bifaciality

22.08%
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 22.08% achieved by mature mass production HJT cell technology



M6 Cell / Module

Small in size, big on power and efficiency, applicable to multiple scenarios



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



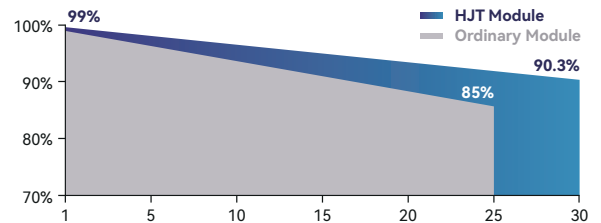
Better Warranty

Extremely low LID/PID in longer service life, 9.7% Power degradation in 30 years

Quality Assurance

12 Years Product Warranty

30 Years Linear Power Warranty



Certificates



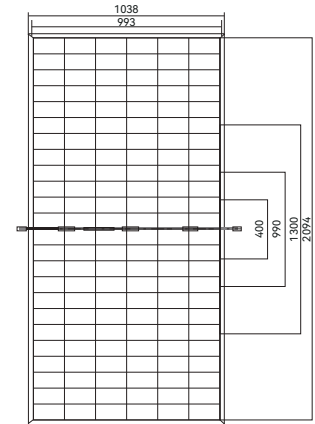
Guosheng Energy Co., Ltd.

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Mechanical Data

Cell(mm)	166×83
Weight (kg)	29±0.5kg
Dimension(L×W×H)(mm)	2094×1038×35mm
Cable(mm)	4mm ² , 300mm(customized length based on needs)
Frame	anodized aluminum
Junction Box	IP68, 1500VDC, 3 Diodes
Packaging Configuration (40' Container;17.5'Trailer)	31 pcs./pallet; 22pallet/container; 682pcs/container 31 pcs./pallet; 30pallet/Trailer; 930pcs/Trailer



Electrical Data (STC)

Model	GSM-MH5/144-BHDG460	GSM-MH5/144-BHDG465	GSM-MH5/144-BHDG470	GSM-MH5/144-BHDG475	GSM-MH5/144-BHDG480
Pmax(Wp)	460	465	470	475	480
Voc(V)	54.13	54.30	54.48	54.65	54.82
Isc(A)	10.66	10.70	10.74	10.77	10.81
Vmpp(V)	45.20	45.52	45.85	46.20	46.49
Impp(A)	10.18	10.22	10.25	10.29	10.33
Efficiency	21.16%	21.39%	21.62%	21.85%	22.08%

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

Electrical Characteristics(BSTC)

Model	GSM-MH5/144-BHDG460	GSM-MH5/144-BHDG465	GSM-MH5/144-BHDG470	GSM-MH5/144-BHDG475	GSM-MH5/144-BHDG480
Pmax(Wp)	509	514	519	524	529
Voc(V)	54.13	54.30	54.48	54.65	54.82
Isc(A)	11.77	11.81	11.84	11.88	11.92
Vmpp(V)	45.20	45.53	45.88	46.24	46.54
Impp(A)	11.25	11.28	11.32	11.35	11.39

α_{sc} (%/K) : 0.04; β_{Voc} (%/K) : -0.24; γ_{Pmp} (%/K) : -0.26

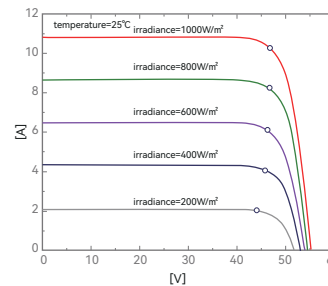
AM1.5, Front irradiance: 1000W/m², Back irradiance: 135W/m², Temperature=25°C, wind speed=1m/s

Working Condition

Maximum System Voltage	1500VDC
Operating Temperature	-40°C ~ +85°C
Maximum Fuse Rating	25A
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)

