



Grand Sunergy

High Efficiency
All-Black HJT Module

GSM- MH6/144- HDGB430

410W | 415W | 420W
425W | 430W



430W

Maximum Power Output

85%

Bifaciality

21.51%

Maximum Efficiency

30Years

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 21.51% achieved by mature mass production HJT cell technology



G1 Cell/Module

G1 size of cell and module, big on power and efficiency, applicable to distributed 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



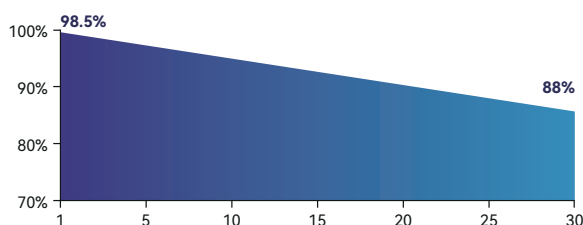
Better Warranty

Extremely low LID/PID in longer service life, less than 12% power degradation in 30 years

Quality Assurance

12 Years Product Warranty

30 Years Linear Power Warranty



Certificates



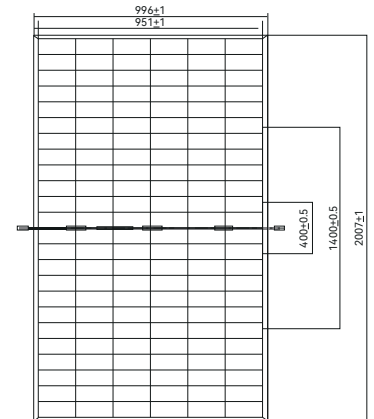
Guosheng Energy Co., Ltd.

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Mechanical Data

Cell(mm)	158×79
Weight(kg)	26.5±0.5kg
Dimension(L×W×H)(mm)	2007×996×35mm
Cable(mm)	4mm ² , 300mm(customized length based on needs)
Frame	anodized aluminum, black frame
Junction Box	IP68, 1500VDC, 3 Diodes
Packaging Configuration (40'Container;17.5'Trailer)	31pcs. / pallet; 24pallet / container; 744pcs / container 31pcs. / pallet; 34pallet / Trailer; 1054pcs / Trailer



Electrical Data (STC)

Model	GSM-MH6/144-HDGB410	GSM-MH6/144-HDGB415	GSM-MH6/144-HDGB420	GSM-MH6/144-HDGB425	GSM-MH6/144-HDGB430
Pmax(Wp)	410	415	420	425	430
Voc(V)	54.66	54.69	54.72	54.75	54.78
Isc(A)	9.74	9.81	9.87	9.93	9.99
Vmpp(V)	44.98	45.22	45.46	45.7	45.95
Impp(A)	9.12	9.18	9.24	9.3	9.36
Efficiency	20.51%	20.76%	21.01%	21.26%	21.51%

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

Electrical Characteristics(BSTC)

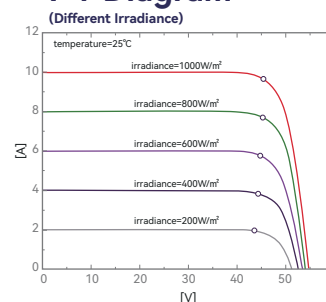
Model	GSM-MH6/144-HDGB410	GSM-MH6/144-HDGB415	GSM-MH6/144-HDGB420	GSM-MH6/144-HDGB425	GSM-MH6/144-HDGB430
Pmax(Wp)	453	458	464	469	474
Voc(V)	54.66	54.69	54.72	54.75	54.78
Isc(A)	10.75	10.83	10.88	10.95	11.02
Vmpp(V)	44.98	45.23	45.48	45.74	46.00
Impp(A)	10.08	10.13	10.20	10.26	10.32
αIsc (%/K) : 0.04; βVoc (%/K) : -0.24; γPmp (%/K) : -0.26					

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

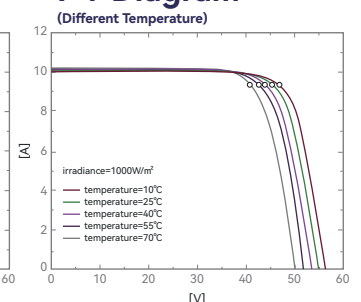
Working Condition

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



I-V Diagram



Data Subject to Change Without notice GSM-MH6/144-HDGB430-EN-20220401 ©Copyright 2022 Grand Sunergy

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