

395-420W
POWER RANGE

Hounen Solar

HNM7-SHDB108 Series

Hounen Solar 10BB HALF-CELL Bifacial
Monocrystalline P - TYPE Solar Module

KEY FEATURES



Excellent Cells Efficiency

MBB technology reduce the distance between busbars and finger grid line which is benefit to power increase.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Bifacial Technology

Up to 25% additional power gain from back side depending on albedo.



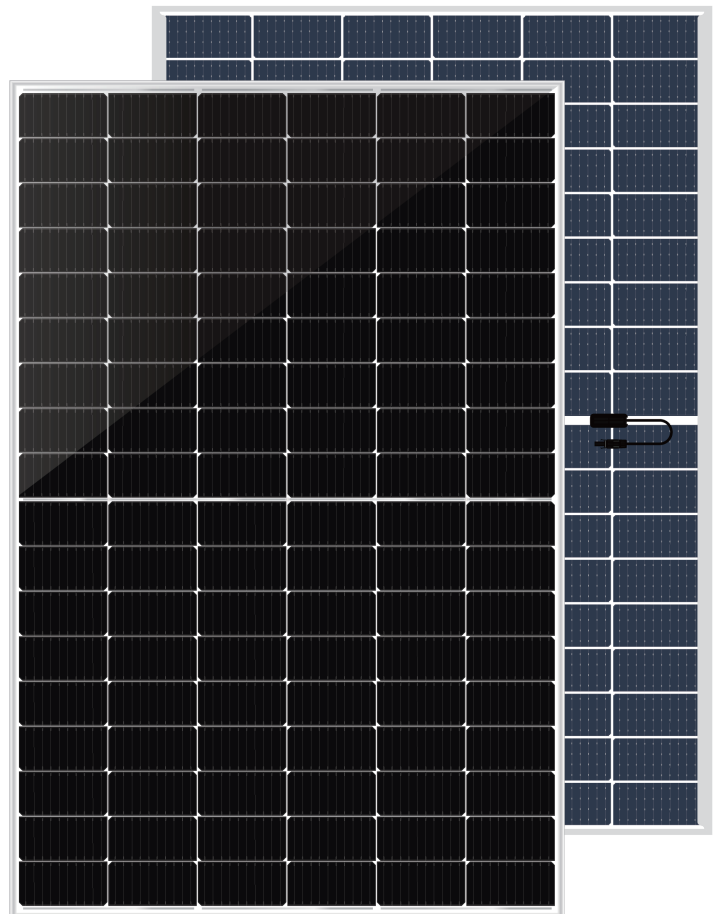
Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.

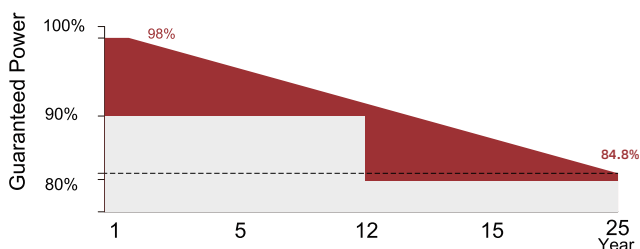


Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



LINEAR PERFORMANCE WARRANTY



IEC61730, UL61730
ISO9001:2015: Quality Management System
ISO14001:2015: Environment Management System
ISO45001:2018 Occupational health and safety management systems



12 YEARS PRODUCT WARRANTY



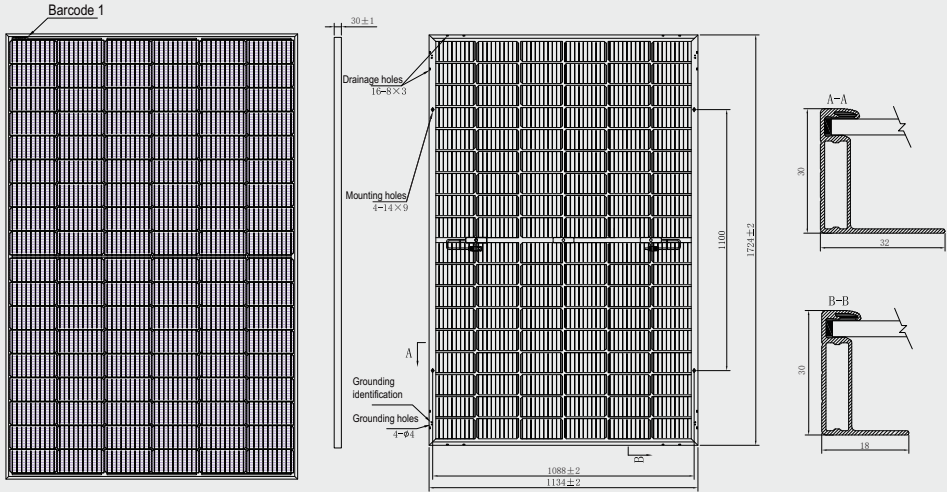
25 YEARS OUTPUT GUARANTEE

420W
MAXIMUM POWER OUTPUT

21.48%
MAXIMUM EFFICIENCY

70±5%
BIFACIALITY

DIMENSIONS OF PV MODULE(mm)



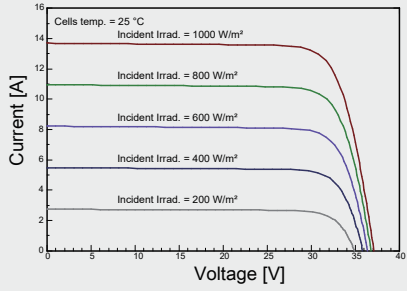
Front View

Side

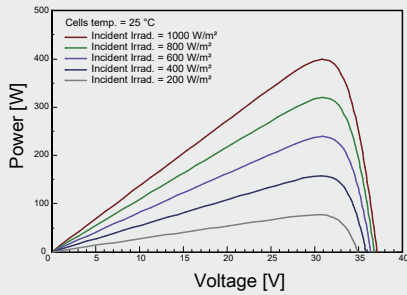
Back View

*Remark: customized frame color and cable length available upon request.

I-V CURVES OF PV MODULE(400W)



P-V CURVES OF PV MODULE(400W)



ELECTRICAL CHARACTERISTICS

Module Type	HNM7-SHDB108-395/M		HNM7-SHDB108-400/M		HNM7-SHDB108-405/M		HNM7-SHDB108-410/M		HNM7-SHDB108-415/M		HNM7-SHDB108-420/M	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	395	295.20	400	299.00	405	302.70	410	306.30	415	310.10	420	313.70
Maximum Power Voltage Vmp(V)	30.70	28.50	30.90	28.70	31.10	28.90	31.30	29.10	31.50	29.30	31.70	29.40
Maximum Power Current Imp(A)	12.87	10.34	12.95	10.41	13.03	10.47	13.10	10.54	13.18	10.60	13.25	10.66
Open Circuit Voltage Voc(V)	36.90	34.50	37.10	34.70	37.30	34.80	37.50	35.00	37.70	35.20	37.90	35.40
Short Circuit Current Isc(A)	13.62	11.00	13.70	11.06	13.78	11.13	13.86	11.19	13.94	11.26	14.02	11.32
Module Efficiency (%)	20.20		20.46		20.72		20.97		21.23		21.48	

*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25±2°C, AM 1.5.
*NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s.

BIFACIAL OUTPUT-REARSIDE POWER GAIN

Maximum Power (Pmax)	415Wp	420Wp	425Wp	431Wp	436Wp	441Wp
5%						
Maximum Efficiency STC (%)	21.21%	21.48%	21.75%	22.02%	22.29%	22.56%
Maximum Power (Pmax)	454Wp	460Wp	466Wp	472Wp	477Wp	483Wp
15%						
Maximum Efficiency STC (%)	23.24%	23.53%	23.82%	24.12%	24.41%	24.71%
Maximum Power (Pmax)	494Wp	500Wp	506Wp	513Wp	519Wp	525Wp
25%						
Maximum Efficiency STC (%)	25.26%	25.58%	25.89%	26.21%	26.53%	26.87%

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	108 (6x18)
Module dimension	1724x1134x30 (With Frame)
Weight	20.5±1Kg
Glass	3.2mm, High Transmission, AR Coated Tempered Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400
Connectors	MC4 or MC4-compatible

*Please refer to regional datasheet for specified connector.

WORKING CONDITIONS

Maximum System Voltage	1500VDC
Operating Temperature	-40°C~+85°C
Maximum Fuse Rating	30A
Rear Side Mechanical Load	2400Pa
Front Side Mechanical Load	5400Pa
Safety Class	Class II

TEMPERATURE RATINGS

Maximum System Voltage	1500VDC
Operating Temperature	-40°C~+85°C
Maximum Fuse Rating	30A
Rear Side Mechanical Load	2400Pa
Front Side Mechanical Load	5400Pa
Safety Class	Class II

Temperature coefficient of Pmax -0.35%/°C

Temperature coefficient of Voc -0.29%/°C

Temperature coefficient of Isc 0.05%/°C

Refer. Bifacial Factor 70±5%

PACKAGING CONFIGURATION

Container	40'HQ
Piece/Box	36

Piece/Container 936
*Customized packaging is available upon request.

Revised in Sep 2023 1st Edition.
Specifications included in this datasheet are subject to change without notice.
Hounen Solar reserves the right of final interpretation.