

POWER RANGE

395-420W

HNM7-SHDB 108 Series

Houнен Solar 10BB HALF-CELL Black 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.



Improved Aesthetics

Compared to conventional modules, this full black modules have a more uniform appearance and superior aesthetics.



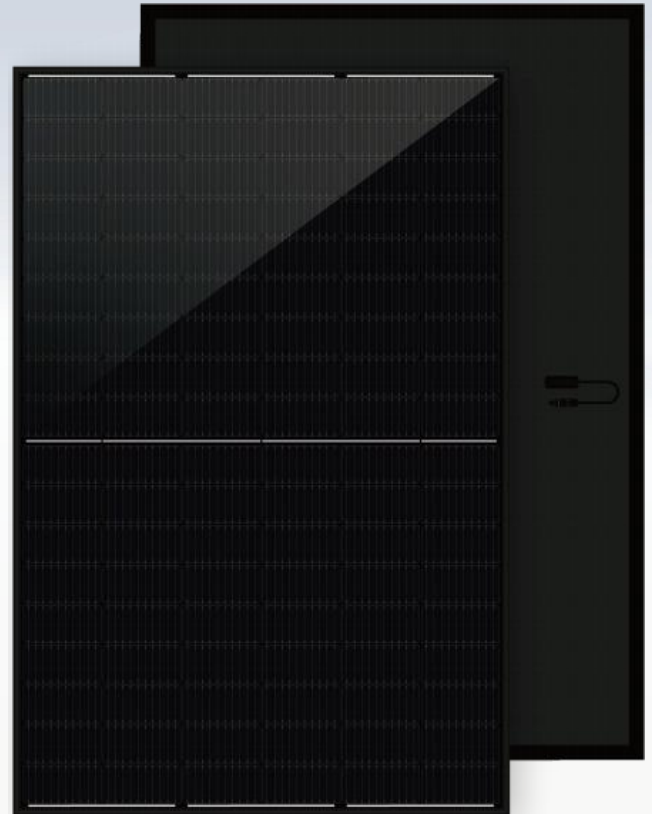
Better Weak Illumination Response

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

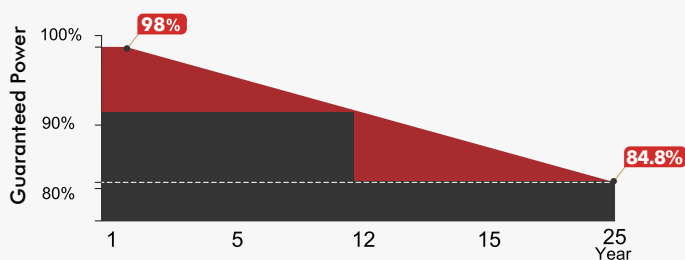


Adapt To Harsh Outdoor Environment

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



LINEAR PERFORMANCE WARRANTY



WARRANTY



Product Warranty



Power Warranty

SYSTEM AND PRODUCT CERTIFICATIONS:

IEC61730, UL61730

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018 Occupational health and safety management systems

California Energy Commission (CEC) Approval



420W

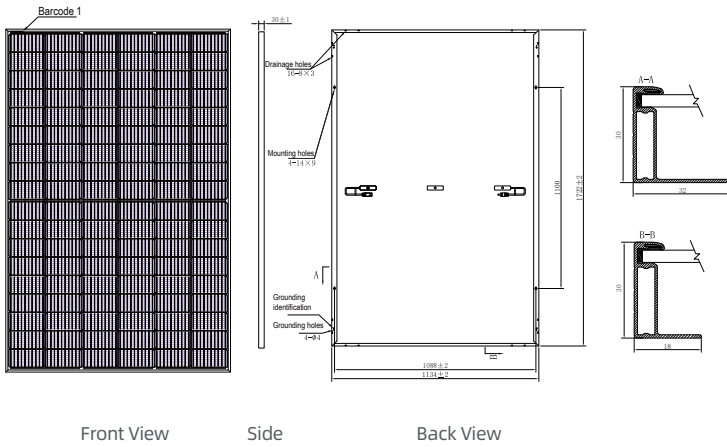
MAXIMUM POWER OUTPUT

21.51%

MAXIMUM EFFICIENCY

DIMENSIONS OF PV MODULE

Unit: mm



*Customized frame color available upon request.

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	108 (6x18)
Module dimension	1722 x 1134 x 30 (With Frame)
Weight	20.5 ± 1 kg
Glass	3.2mm, High Transmission, AR Coated Tempered Glass
Junction Box	IP68, 3 diodes
Cables	4mm ² , 1200 mm (With Connectors)
Connectors	MC4 (PV-KST4/6II-UR, PV-KBT4/6II-UR)

PACKAGING CONFIGURATION

Container	40'HQ
Piece/Box	36
Piece/Container	936

*Customized packaging is available upon request.

ELECTRICAL CHARACTERISTICS

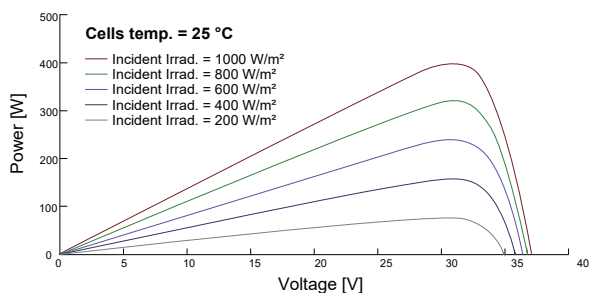
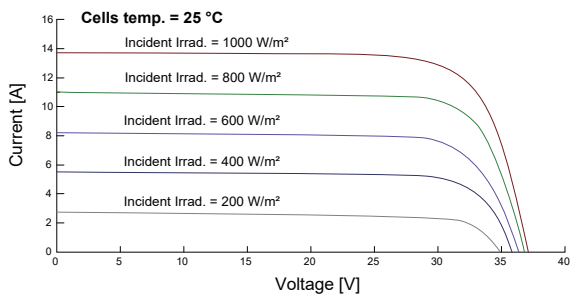
Module Type	HNM7-SHDB108-395/M		HNM7-SHDB108-400/M		HNM7-SHDB108-405/M		HNM7-SHDB108-410/M		HNM7-SHDB108-415/M		HNM7-SHDB108-420/M	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
STC/NMOT												
Nominal Power Watt Pmax(W)*	395	295.20	400	299.00	405	302.70	410	306.30	415	310.10	420	313.70
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)	13.63	11.00	13.70	11.06	13.77	11.13	13.84	11.19	13.91	11.26	13.98	11.32
Module Efficiency (%)	20.23		20.48		20.74		21.00		21.25		21.51	

*The data above is for reference only and the actual data is in accordance with the practical testing
 *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.
 *Measuring uncertainty: ±3%, Power tolerance: ±3%

*Electrical data in this catalog do not refer to a single module and they are not part of the offer.
 *They only serve for comparison among different module types.
 *All the electrical characteristics such as Im, Vm, Isc, Voc and FF are within ±5% tolerance.

I-V & P-V CURVES

(400W)



TEMPERATURE RATINGS

NMOT	44°C ± 2°C
Temperature coefficient of Pmax	-0.35%/°C
Temperature coefficient of Voc	-0.29%/°C
Temperature coefficient of Isc	0.05%/°C
Safety Class	Class II

WORKING CONDITIONS

Maximum System Voltage	1500VDC
Operating Temperature	-40°C ~ +85°C
Maximum Fuse Rating	25A
Rear Side Mechanical Load	2400Pa
Front Side Mechanical Load	5400Pa

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