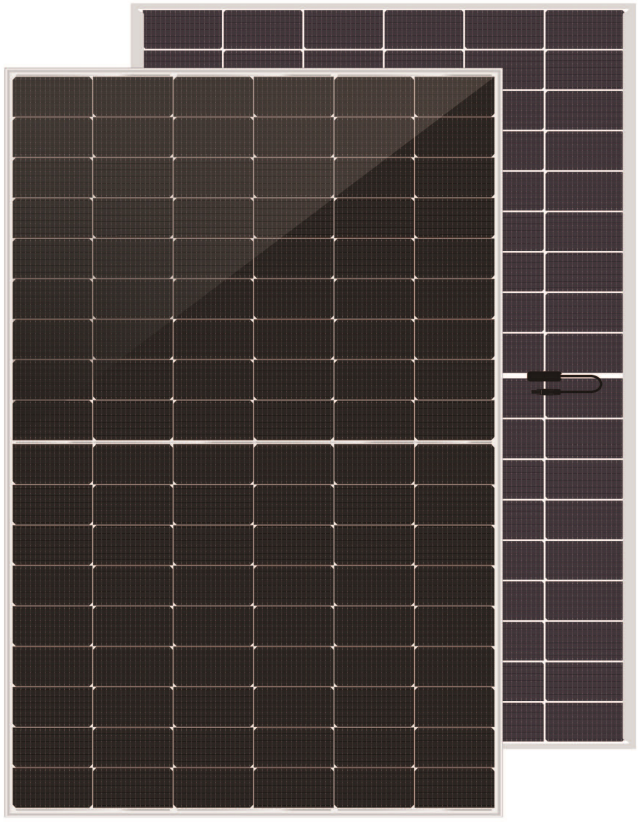
415-435W
POWER RANGE

ASIAN DRAGON
International Corporation
EVERYTHING UNDER THE SUN
Trading Internationally since 1980

HNM7-UHLDD108 Series

Solar 16BB HALF-CELL Bifacial Double Glass
Monocrystalline N - TYPE TOPCON Solar Module

KEY FEATURES



Excellent Cells Efficiency

SMBB technology reduce the distance between busbars and finger grid line which is benefit to power

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

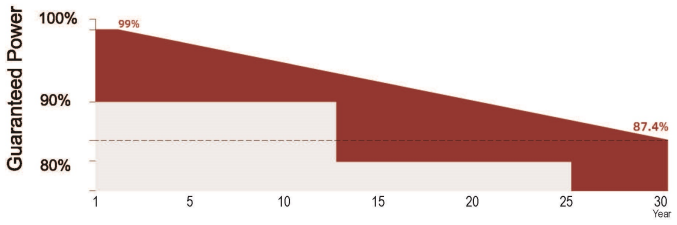
More power output in weak light condition, such as haze, cloudy, and early morning.

Adapt To Harsh Outdoor Environment

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

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

LINEAR PERFORMANCE WARRANTY



12 YEARS PRODUCT WARRANTY

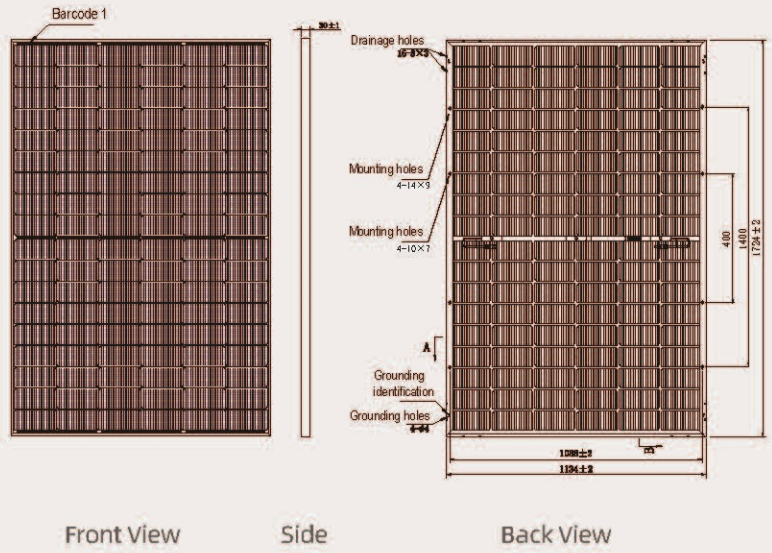
30 YEARS OUTPUT GUARANTEE

435W
AXIMUM POWER OUTPUT

22.25%
MAXIMUM EFFICIENCY

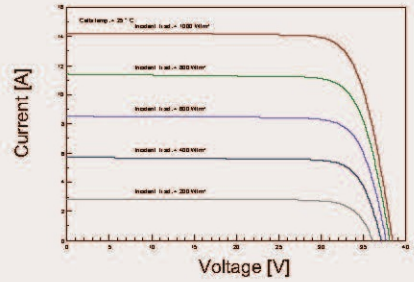
80±10%
BIFACIALITY

DIMENSIONS OF PV MODULE(mm)

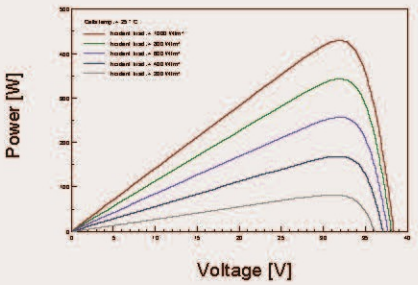


*Remark: customized frame color and cable length available upon request.

I-V CURVES OF PV MODULE(430W)



P-V CURVES OF PV MODULE(430W)



ELECTRICAL CHARACTERISTICS

Module Type	HNM7-UHLDD108-415/N		HNM7-UHLDD108-420/N		HNM7-UHLDD108-425/N		HNM7-UHLDD108-430/N		HNM7-UHLDD108-435/N	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	415	313.2	420	317.1	425	320.1	430	324.5	435	328.5
Maximum Power Voltage Vmp(V)	31.30	29.40	31.50	29.60	31.70	29.80	31.90	30.00	32.10	30.20
Maximum Power Current Imp(A)	13.26	10.74	13.34	10.70	13.41	10.76	13.48	10.82	13.56	10.88
Open Circuit Voltage Voc(V)	37.80	35.70	38.00	35.90	38.20	36.00	38.40	36.20	38.60	36.40
Short Circuit Current Isc(A)	14.04	11.33	14.11	11.39	14.18	11.44	14.25	11.50	14.32	11.56
Module Efficiency (%)	21.28		21.48		21.74		21.99		22.25	

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

BIFACIAL OUTPUT-REARSIDE POWER GAIN

Maximum Power (Pmax)	436Wp	441Wp	446Wp	452Wp	457Wp
5%					
Maximum Efficiency STC (%)	22.29%	22.56%	22.83%	23.09%	23.36%
Maximum Power (Pmax)	477Wp	483Wp	489Wp	495Wp	500Wp
15%					
Maximum Efficiency STC (%)	24.41%	24.71%	25.00%	25.29%	25.59%
Maximum Power (Pmax)	519Wp	525Wp	531Wp	538Wp	544Wp
25%					
Maximum Efficiency STC (%)	26.53%	26.85%	27.17%	27.49%	27.81%

WORKING CONDITIONS

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

TEMPERATURE RATINGS

NMOT	44℃±2℃
Temperature coefficient of Pmax	-0.30%/℃
Temperature coefficient of Voc	-0.25%/℃
Temperature coefficient of Isc	0.046%/℃
Refer. Bifacial Factor	80±10%

MECHANICAL DATA

Solar cells	N-type Monocrystalline
Cells orientation	108 (6x18)
Module dimension	1724x1134x30 (With Frame)
Weight	24.5±1Kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (With Connectors)
Connectors	MC4 or MC4-compatible

*Please refer to regioal datasheet for specified connector.

PACKAGING CONFIGURATION

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

*Customized packaging is available upon request.

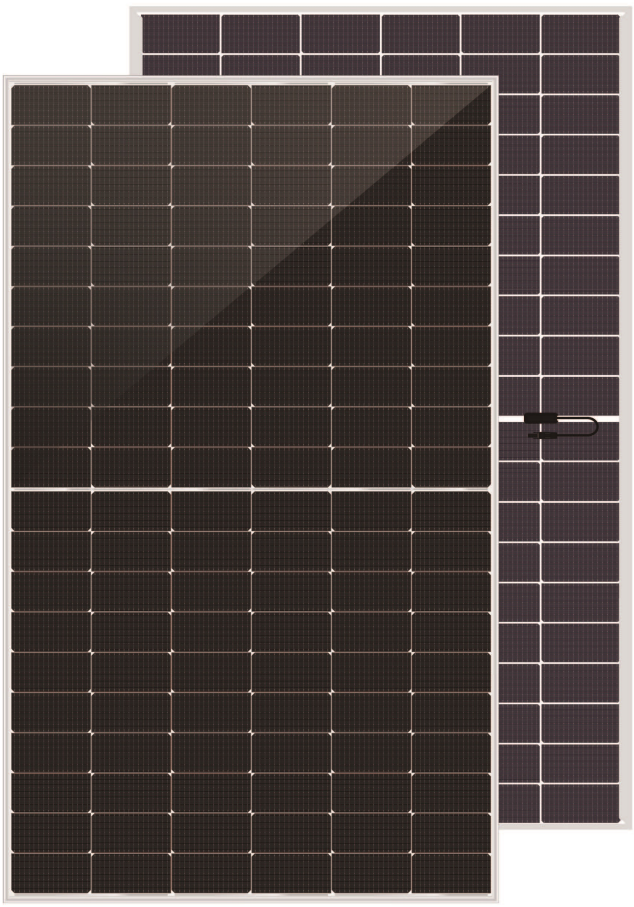
470-490W
POWER RANGE

ASIAN DRAGON
International Corporation
EVERYTHING UNDER THE SUN
Trading Internationally since 1980

HNM7-UHLDD120 Series

Solar 16BB HALF-CELL Bifacial Double Glass
Monocrystalline N - TYPE TOPCON Solar Module

KEY FEATURES



Excellent Cells Efficiency
SMBB technology reduce the distance between busbars and finger grid line which is benefit to power

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

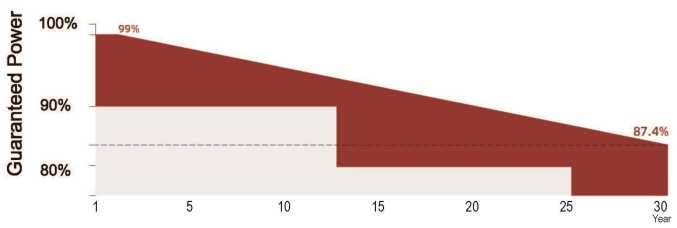
Bifacial Technology
Up to 25% additional power gain from back side depending on albedo.

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.

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

LINEAR PERFORMANCE WARRANTY



12 YEARS PRODUCT WARRANTY

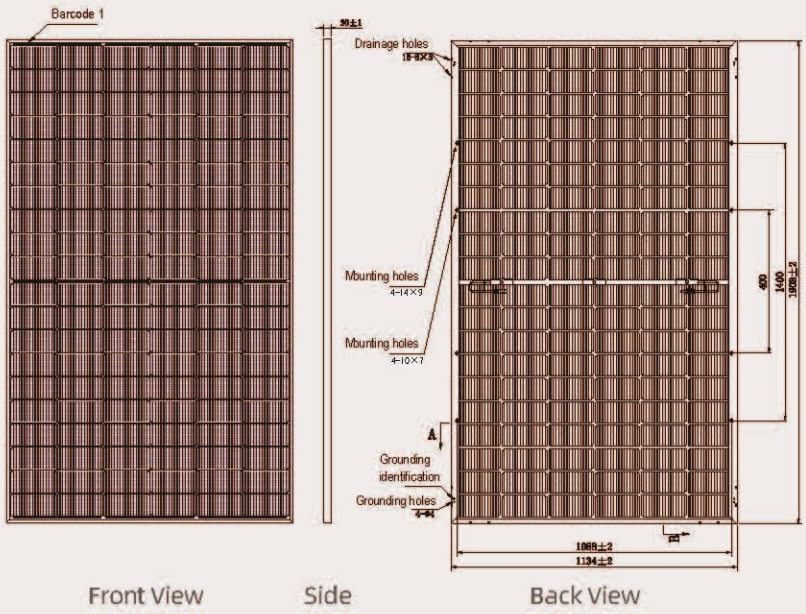
30 YEARS OUTPUT GUARANTEE

490W
AXIMUM POWER OUTPUT

22.71%
MAXIMUM EFFICIENCY

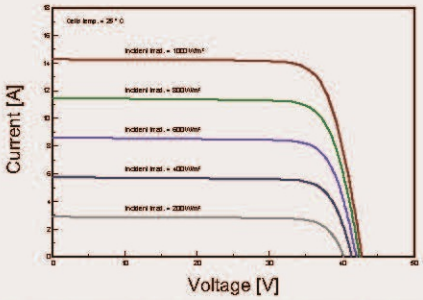
80±10%
BIFACIALITY

DIMENSIONS OF PV MODULE(mm)

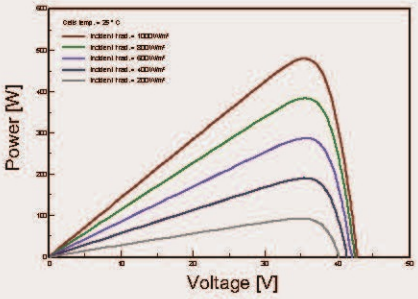


*Remark: customized frame color and cable length available upon request.

I-V CURVES OF PV MODULE(480W)



P-V CURVES OF PV MODULE(480W)



ELECTRICAL CHARACTERISTICS

Module Type	HNM7-UHLDD120-470/N		HNM7-UHLDD120-475/N		HNM7-UHLDD120-480/N		HNM7-UHLDD120-485/N		HNM7-UHLDD120-490/N	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	470	355.5	475	359.0	480	362.9	485	366.3	490	369.9
Maximum Power Voltage Vmp(V)	35.10	33.00	35.30	33.20	35.50	33.40	35.70	33.60	35.90	33.70
Maximum Power Current Imp(A)	13.40	10.76	13.46	10.82	13.53	10.87	13.59	10.92	13.65	10.97
Open Circuit Voltage Voc(V)	42.40	40.00	42.60	40.20	42.80	40.40	43.00	40.60	43.20	40.80
Short Circuit Current Isc(A)	14.17	11.44	14.24	11.49	14.31	11.55	14.38	11.60	14.45	11.66
Module Efficiency (%)	21.78		22.01		22.24		22.47		22.71	

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

BIFACIAL OUTPUT-REARSIDE POWER GAIN

Maximum Power (Pmax)	494Wp	499Wp	504Wp	509Wp	457Wp
5% Maximum Efficiency STC (%)	22.87%	23.11%	23.35%	23.60%	23.84%
Maximum Power (Pmax)	541Wp	546Wp	552Wp	558Wp	564Wp
15% Maximum Efficiency STC (%)	25.05%	25.31%	25.58%	25.85%	26.11%
Maximum Power (Pmax)	588Wp	594Wp	600Wp	606Wp	613Wp
25% Maximum Efficiency STC (%)	27.22%	27.51%	27.80%	28.09%	28.38%

WORKING CONDITIONS

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

TEMPERATURE RATINGS

NMOT	44℃±2℃
Temperature coefficient of Pmax	-0.30%/℃
Temperature coefficient of Voc	-0.25%/℃
Temperature coefficient of Isc	0.046%/℃
Refer. Bifacial Factor	80±10%

MECHANICAL DATA

Solar cells	N-type Monocrystalline
Cells orientation	120 (6x20)
Module dimension	1903x1134x30 (With Frame)
Weight	26.5±1Kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (With Connectors)
Connectors	MC4 or MC4-compatible

*Please refer to regioal datasheet for specified connector.

PACKAGING CONFIGURATION

Container	40'HQ
Piece/Box	36
Piece/Container	864

*Customized packaging is available upon request.

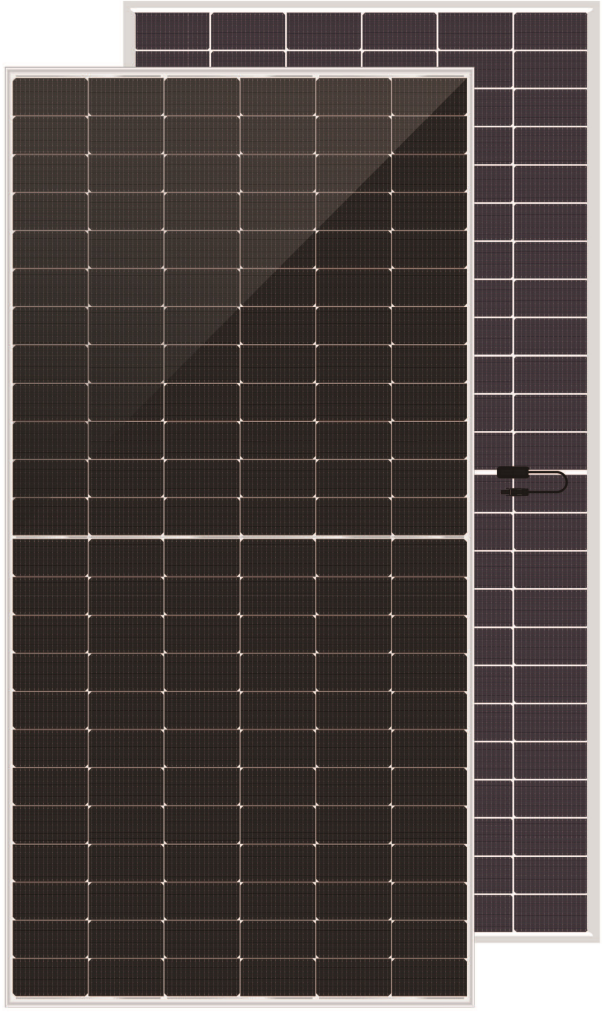
565-585W
POWER RANGE

ASIAN DRAGON
International Corporation
EVERYTHING UNDER THE SUN
Trading Internationally since 1980

HNM7-UHLDD144 Series

Solar 16BB HALF-CELL Bifacial Double Glass
Monocrystalline N - TYPE TOPCON Solar Module

KEY FEATURES



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Anti PID
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Bifacial Technology
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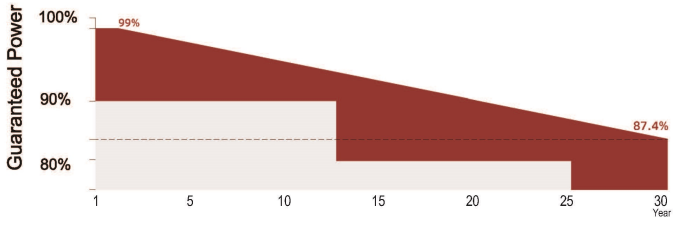
Better Weak Illumination Response
More power output in weak light condition, such as haze, cloudy, and early morning.

Adapt To Harsh Outdoor Environment
Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.

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

LINEAR PERFORMANCE WARRANTY



12 YEARS PRODUCT WARRANTY

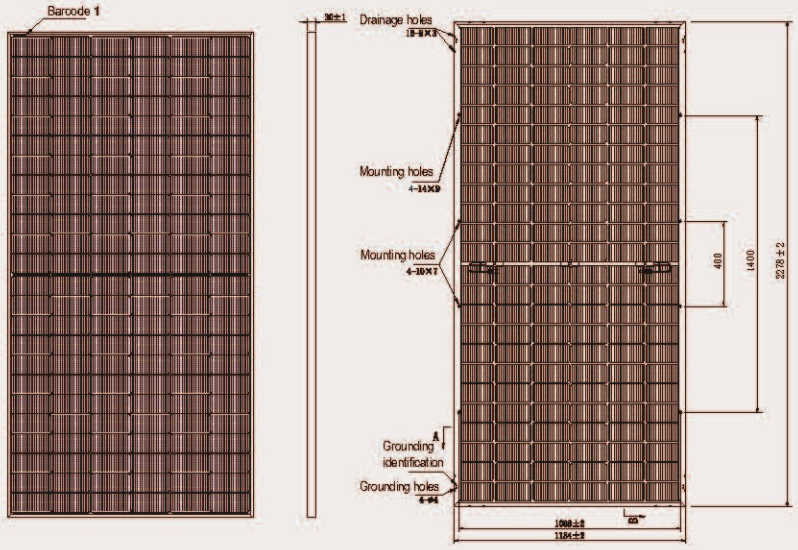
30 YEARS OUTPUT GUARANTEE

585W
MAXIMUM POWER OUTPUT

22.65%
MAXIMUM EFFICIENCY

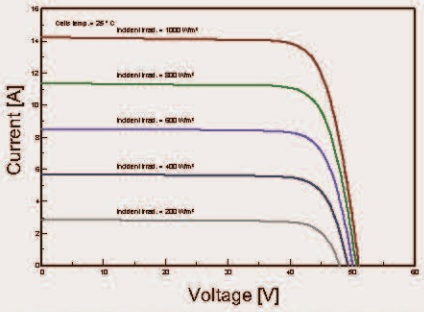
80±10%
BIFACIALITY

DIMENSIONS OF PV MODULE(mm)

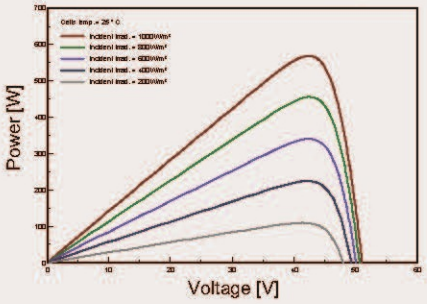


*Remark: customized frame color and cable length available upon request.

I-V CURVES OF PV MODULE(570W)



P-V CURVES OF PV MODULE(570W)



ELECTRICAL CHARACTERISTICS

Module Type	HNM7-UHLDD144-565/N		HNM7-UHLDD144-570/N		HNM7-UHLDD144-575/N		HNM7-UHLDD144-580/N		HNM7-UHLDD144-585/N	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	565	426.4	570	430.3	575	433.9	580	437.8	585	441.4
Maximum Power Voltage Vmp(V)	42.20	39.70	42.40	39.90	42.60	40.00	42.80	40.20	43.00	40.40
Maximum Power Current Imp(A)	13.39	10.74	13.45	10.79	13.50	10.83	13.56	10.88	13.61	10.93
Open Circuit Voltage Voc(V)	50.90	48.00	51.10	48.20	51.30	48.40	51.50	48.60	51.70	48.80
Short Circuit Current Isc(A)	14.17	11.44	14.23	11.48	14.29	11.53	14.35	11.58	14.41	11.63
Module Efficiency (%)	21.87		22.07		22.26		22.45		22.65	

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

BIFACIAL OUTPUT-REARSIDE POWER GAIN

Maximum Power (Pmax)	593Wp	599Wp	604Wp	609Wp	614Wp
5%					
Maximum Efficiency STC (%)	22.96%	23.19%	23.38%	23.57%	23.77%
Maximum Power (Pmax)	650Wp	656Wp	661Wp	667Wp	673Wp
15%					
Maximum Efficiency STC (%)	25.16%	25.39%	25.59%	25.82%	26.05%
Maximum Power (Pmax)	706Wp	713Wp	719Wp	725Wp	731Wp
25%					
Maximum Efficiency STC (%)	27.33%	27.60%	27.83%	28.07%	28.30%

WORKING CONDITIONS

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

TEMPERATURE RATINGS

NMOT	44℃±2℃
Temperature coefficient of Pmax	-0.30%/℃
Temperature coefficient of Voc	-0.25%/℃
Temperature coefficient of Isc	0.046%/℃
Refer. Bifacial Factor	80±10%

MECHANICAL DATA

Solar cells	N-type Monocrystalline
Cells orientation	144 (6x24)
Module dimension	2278x1134x30 (With Frame)
Weight	31.5±1Kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (With Connectors)
Connectors	MC4 or MC4 Compatible

*Please refer to regioal datasheet for specified connector.

PACKAGING CONFIGURATION

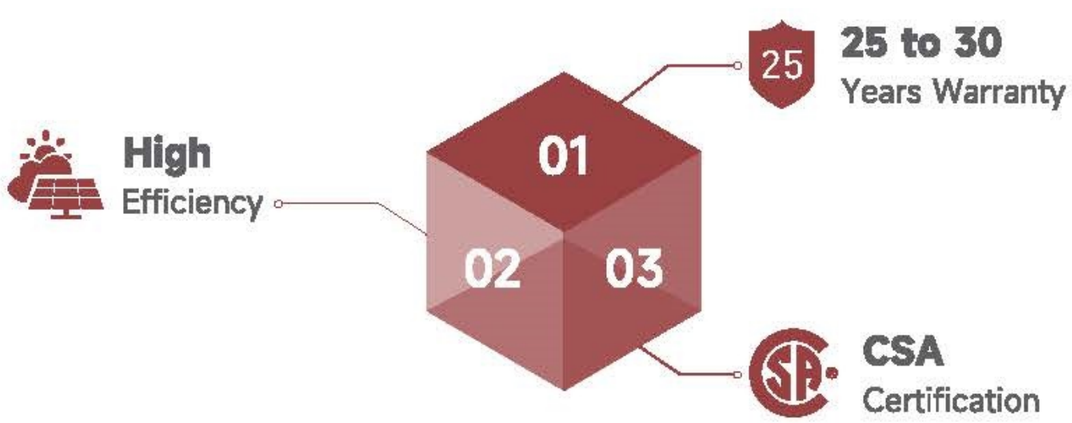
Container	40'HQ
Piece/Box	36
Piece/Container	720

*Customized packaging is available upon request.

Advanced Manufacturing

Our PV modules are proudly assembled in the U.S.

We maintain strict quality control throughout the entire production process to ensure that every panel we sell meets our high standards for quality and durability.



Take a look of our state-of-the-art facility!

We are dedicated to achieving an annual production capacity of 1 gigawatt by the end of 2024.
we manufacture high-efficiency PV modules in South Carolina!

Experience Our Innovation and Quality Now!






Top Efficiency and Advanced Technology

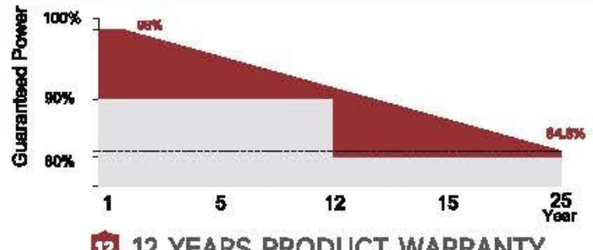
We manufacture high-efficiency PV modules using premium monocrystalline silicon solar cells, by advanced manufacturing processes, designed to provide exceptional performance and resistance to Potential Induced Degradation (PID). With our dedicated PV manufacturing facilities and warehouses located in South Carolina, as well as a warehouse in California, we guarantee timely delivery to meet your demands.

395 - 420W POWER RANGE

HNM7-SHDB108 Series

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

LINEAR PERFORMANCE WARRANTY



12 YEARS PRODUCT WARRANTY

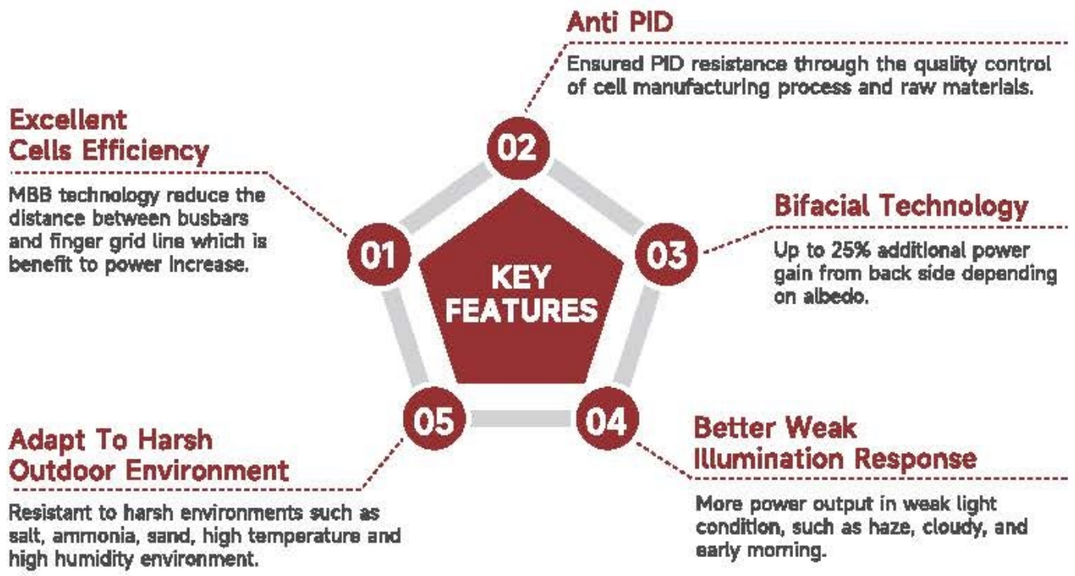
25 YEARS OUTPUT GUARANTEE

IEC61730, UL61730

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018:Occupational health and safety management systems

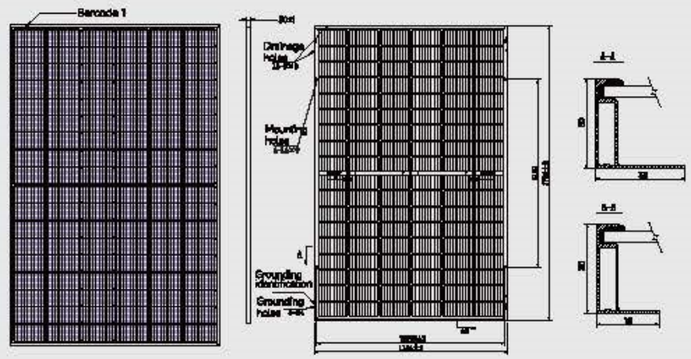


420W MAXIMUM POWER OUTPUT

21.48% MAXIMUM EFFICIENCY

70±5% BIFACIALITY

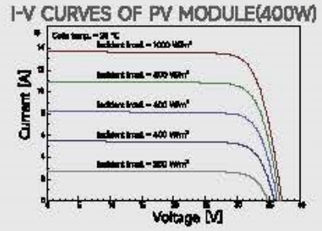
DIMENSIONS OF PV MODULE(mm)



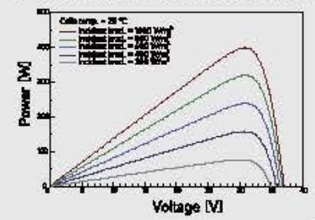
Front View Side Back View

*Generic 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	28.60	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
6%						
Maximum Efficiency STC (%)	21.27%	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%

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
Safty Class	Class II

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
Refer. Bifacial Factor	70±5%

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	108 (6x18)
Module dimension	1724x1134x30 (With Frame)
Weight	20.8±1Kg
Glass	3.2mm, High Transmission, AR Coated Tempered Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (With Connectors)
Connectors	MC4 or Compatible

*Please refer to regional datasheet for specified connector.

PACKAGING CONFIGURATION

Container	40HQ
Piece/Box	36
Piece/Container	936

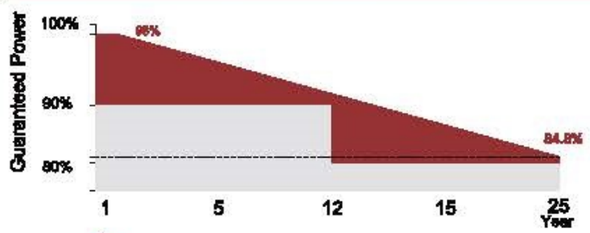
*Customized packaging is available upon request.

530 - 555W POWER RANGE

HNM7-SHDB144 Series

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

LINEAR PERFORMANCE WARRANTY



12 YEARS PRODUCT WARRANTY

25 YEARS OUTPUT GUARANTEE

IEC61730, UL61730

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018:Occupational health and safety management systems

KEY FEATURES

01 Excellent Cells Efficiency

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

02 Anti PID

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

03 Bifacial Technology

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

04 Better Weak Illumination Response

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

05 Adapt To Harsh Outdoor Environment

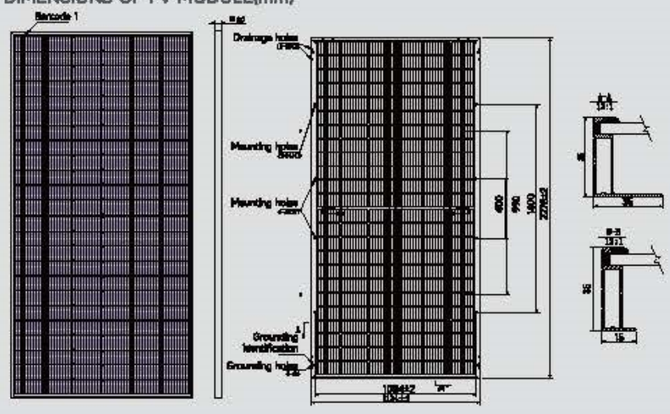
Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.

555W MAXIMUM POWER OUTPUT

21.48% MAXIMUM EFFICIENCY

70±5% BIFACIALITY

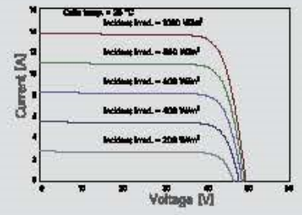
DIMENSIONS OF PV MODULE(mm)



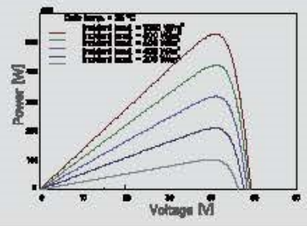
Front View Side Back View

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

I-V CURVES OF PV MODULE(530W)



P-V CURVES OF PV MODULE(530W)



ELECTRICAL CHARACTERISTICS

MODULE TYPE	HNM7-SHDB144-530/M		HNM7-SHDB144-535/M		HNM7-SHDB144-540/M		HNM7-SHDB144-545/M		HNM7-SHDB144-550/M		HNM7-SHDB144-555/M	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	530	396.40	535	399.90	540	403.60	545	406.80	550	410.80	555	414.60
Maximum Power Voltage Vmp(V)	41.10	38.20	41.30	38.40	41.50	38.60	41.70	38.80	41.90	38.90	42.10	39.10
Maximum Power Current Imp(A)	12.91	10.38	12.96	10.42	13.02	10.47	13.07	10.49	13.13	10.56	13.19	10.61
Open Circuit Voltage Voc(V)	49.40	46.20	49.60	46.30	49.80	46.50	50.00	46.70	50.20	46.90	50.40	47.10
Short Circuit Current isc(A)	13.65	11.02	13.71	11.07	13.77	11.12	13.83	11.17	13.89	11.22	13.95	11.27
Module Efficiency (%)	20.52		20.71		20.90		21.10		21.29		21.48	

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

BIFACIAL OUTPUT-REARSIDE POWER GAIN

5%	Maximum Power (Pmax)	557Wp	562Wp	567Wp	572Wp	578Wp	583Wp
	Maximum Efficiency STC (%)	21.56%	21.76%	21.95%	22.14%	22.37%	22.57%
15%	Maximum Power (Pmax)	610Wp	615Wp	621Wp	627Wp	633Wp	638Wp
	Maximum Efficiency STC (%)	23.61%	23.81%	24.04%	24.27%	24.50%	24.70%
25%	Maximum Power (Pmax)	663Wp	669Wp	675Wp	681Wp	688Wp	694Wp
	Maximum Efficiency STC (%)	25.67%	25.90%	26.13%	26.36%	26.63%	26.87%

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
Safty Class	Class II

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
Refer. Bifacial Factor	70±5%

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	144 (6x24)
Module dimension	2278x1134x35 (With Frame)
Weight	28±1Kg
Glass	3.2mm, High Transmission, AR Coated Tempered Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (with connectors)
Connectors	MC4 or Compatible

*Please refer to regional datasheet for specified connector.

PACKAGING CONFIGURATION

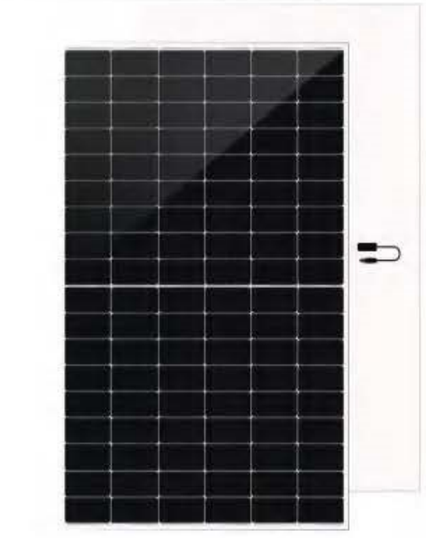
Container	40'HQ
Piece/Box	31
Piece/Container	620

*Customized packaging is available upon request.

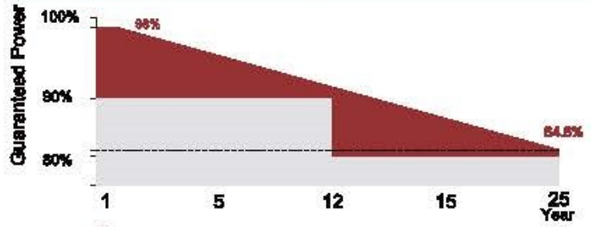
395 - 420W POWER RANGE

HNM7-SHLDB108 Series

Solar 10BB HALF-CELL Bifacial Monocrystalline P-TYPE Single Glass Solar Module



LINEAR PERFORMANCE WARRANTY



12 12 YEARS PRODUCT WARRANTY

25 25 YEARS OUTPUT GUARANTEE

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

Light Weight Design

PV Module weight 4.7kg/m², Suitablefor low load roofs.

Excellent Cells Efficiency

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

Easy Installation

Various mounting methods, adhesive fixing, removable press fixing.

KEY FEATURES

01 02 03 04 05

Safe and Reliable

Anti-dust accumulation design,light-weight and safe, Higher returns, convenient operation and maintenance.

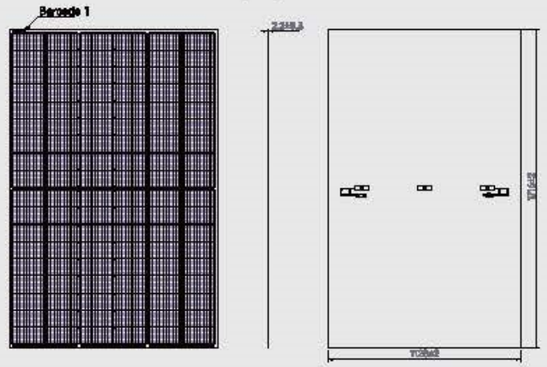
High Strength

The use of ultra-thin tempered glass on the surface, anti-hail impact, load-resistant capacity is strong.

420W
MAXIMUM POWER OUTPUT

21.70%
MAXIMUM EFFICIENCY

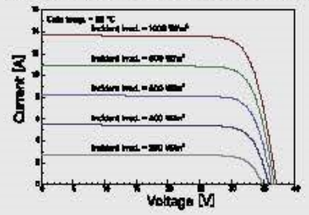
DIMENSIONS OF PV MODULE(mm)



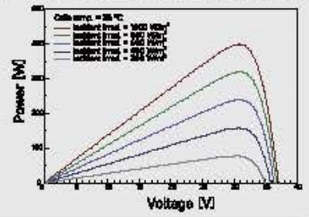
Front View Side Back View

*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 (STC)

MODULE TYPE	HNM7-SHLDB108-395/M	HNM7-SHLDB108-400/M	HNM7-SHLDB108-405/M	HNM7-SHLDB108-410/M	HNM7-SHLDB108-415/M	HNM7-SHLDB108-420/M
Nominal Power Watt Pmax(W)*	395	400	405	410	415	420
Maximum Power Voltage Vmp(V)	30.70	30.90	31.10	31.30	31.50	31.70
Maximum Power Current Imp(A)	12.87	12.95	13.03	13.10	13.18	13.25
Open Circuit Voltage Voc(V)	36.90	37.10	37.30	37.50	37.70	37.90
Short Circuit Current Isc(A)	13.62	13.70	13.78	13.86	13.94	14.02
Module Efficiency (%)	20.41	20.66	20.92	21.18	21.44	21.70

*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.

ELECTRICAL CHARACTERISTICS (NMOT)

Nominal Power Watt Pmax(W)*	296.20	299.00	302.70	306.50	310.10	313.70
Maximum Power Voltage Vmp(V)	28.50	28.70	28.90	29.10	29.30	29.40
Maximum Power Current Imp(A)	10.34	10.41	10.47	10.54	10.60	10.66
Open Circuit Voltage Voc(V)	34.50	34.70	34.80	35.00	35.20	35.40
Short Circuit Current Isc(A)	11.00	11.06	11.13	11.19	11.26	11.32
Module Efficiency (%)	20.41	20.66	20.92	21.18	21.44	21.70

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	2400Pa
Safty Class	Class II

TEMPERATURE RATINGS

NMOT	44°C±2°C
Temperature coefficient of Pmax	-0.35%/°C
Temperature coefficient of Voc	-0.26%/°C
Temperature coefficient of Isc	0.05%/°C

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	108 (6x18)
Module dimension	1716x1128x2.2 (without frame)
Weight	9.1±1Kg
Glass	High Transmission, AR Coated Tempered Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (with connectors)
Connectors	MC4 or Compatible

*Please refer to regional datasheet for specified connector.

PACKAGING CONFIGURATION

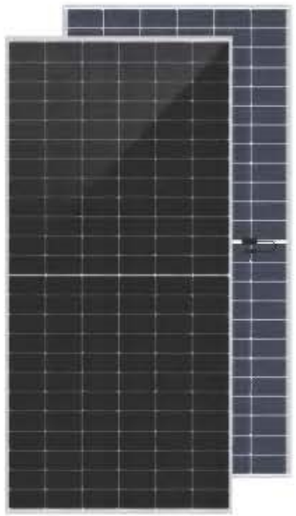
Container	40'HQ
Piece/Box	46
Piece/Container	1104

*Customized packaging is available upon request.

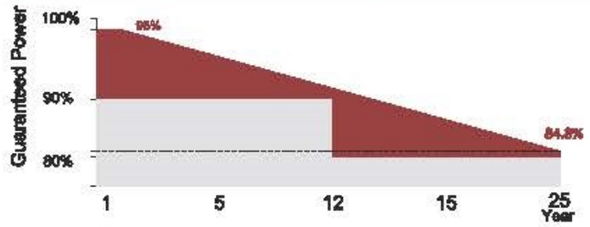
585 - 610W POWER RANGE

HNM7-SHDB156 Series

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



LINEAR PERFORMANCE WARRANTY



12 12 YEARS PRODUCT WARRANTY

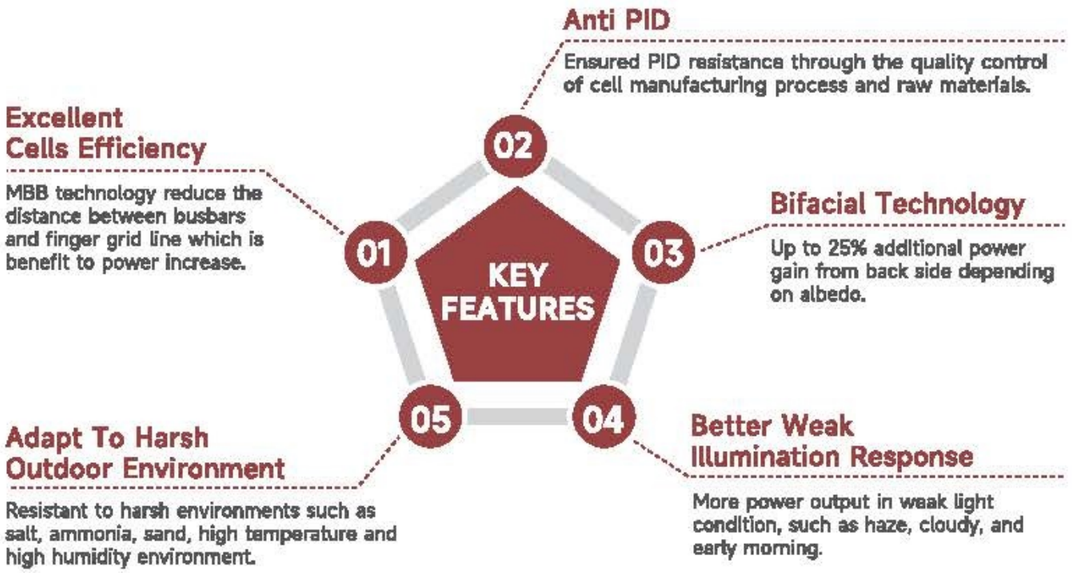
25 25 YEARS OUTPUT GUARANTEE

IEC61730, UL61730

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018: Occupational health and safety management systems

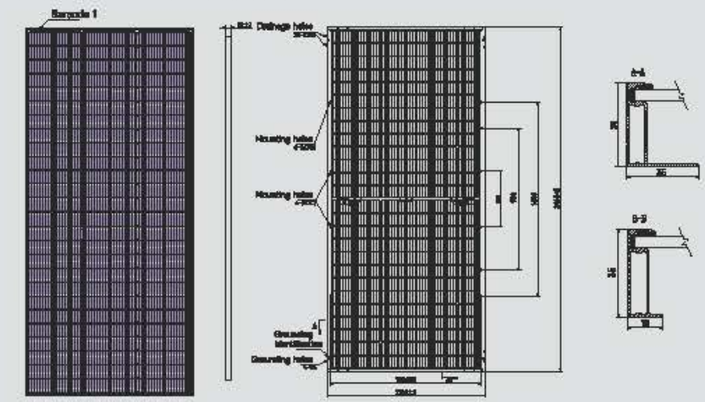


610W MAXIMUM POWER OUTPUT

21.82% MAXIMUM EFFICIENCY

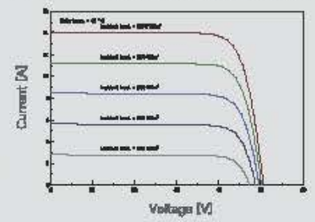
70±5% BIFACIALITY

DIMENSIONS OF PV MODULE(mm)

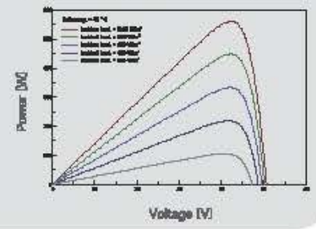


*Remark: customized frame color and cable length available upon request.

I-V CURVES OF PV MODULE(605W)



P-V CURVES OF PV MODULE(605W)



ELECTRICAL CHARACTERISTICS

MODULE TYPE	HNM7-SHDB156-585/M		HNM7-SHDB156-590/M		HNM7-SHDB156-595/M		HNM7-SHDB156-600/M		HNM7-SHDB156-605/M		HNM7-SHDB156-610/M	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	585	436.10	590	439.90	595	443.40	600	447.00	605	450.60	610	453.10
Maximum Power Voltage Vmp(V)	44.90	41.60	45.10	41.80	45.30	42.00	45.50	42.20	45.70	42.30	45.90	42.50
Maximum Power Current Imp(A)	13.03	10.48	13.09	10.52	13.14	10.56	13.19	10.60	13.24	10.64	13.29	10.66
Open Circuit Voltage Voc(V)	53.20	49.70	53.40	49.80	53.60	50.00	53.80	50.20	54.00	50.40	54.20	50.50
Short Circuit Current Isc(A)	13.78	11.13	13.83	11.17	13.88	11.21	13.93	11.25	13.98	11.29	14.03	11.33
Module Efficiency (%)	20.98		21.11		21.29		21.46		21.64		21.82	

*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) 6%	614Wp	620Wp	626Wp	630Wp	635Wp	641Wp
Maximum Efficiency STC (%)	21.97%	22.16%	22.35%	22.54%	22.73%	22.91%
Maximum Power (Pmax) 15%	673Wp	679Wp	684Wp	690Wp	696Wp	702Wp
Maximum Efficiency STC (%)	24.07%	24.27%	24.46%	24.68%	24.89%	25.10%
Maximum Power (Pmax) 25%	731Wp	738Wp	744Wp	750Wp	756Wp	763Wp
Maximum Efficiency STC (%)	26.16%	26.38%	26.61%	26.83%	27.05%	27.28%

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
Safty Class	Class II

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
Refer. Bifacial Factor	70±5%

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	156(6x26)
Module dimension	2465x1134x35 (With Frame)
Weight	30±1Kg
Glass	3.2mm, High Transmission, AR Coated Tempered Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (with connector)
Connectors	MC4 or Compatible

*Please refer to regional datasheet for specified connector.

PACKAGING CONFIGURATION

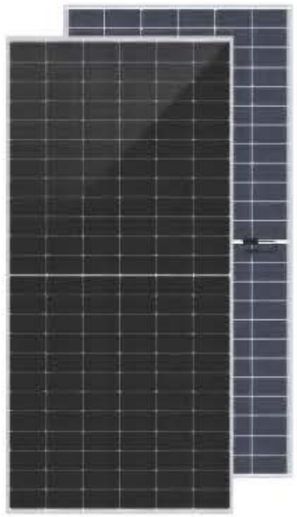
Container	40'HQ
Piece/Box	31
Piece/Container	496

*Customized packaging is available upon request.

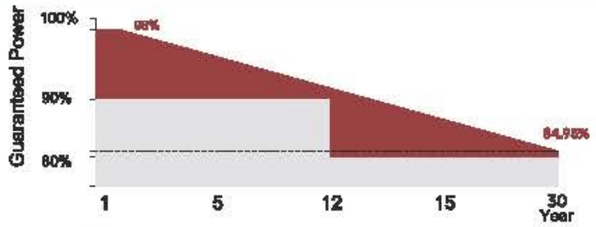
650 - 670W POWER RANGE

HNM8-THLDD132 Series

Solar 12BB HALF-CELL Bifacial Dual Glass Monocrystalline P - TYPE Solar Module



LINEAR PERFORMANCE WARRANTY



12 12 YEARS PRODUCT WARRANTY

30 30 YEARS OUTPUT GUARANTEE

IEC61730, UL61730

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018: Occupational health and safety management systems

KEY FEATURES

01 Excellent Cells Efficiency

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

02 Anti PID

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

03 Bifacial Technology

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

04 Better Weak Illumination Response

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

05 Adapt To Harsh Outdoor Environment

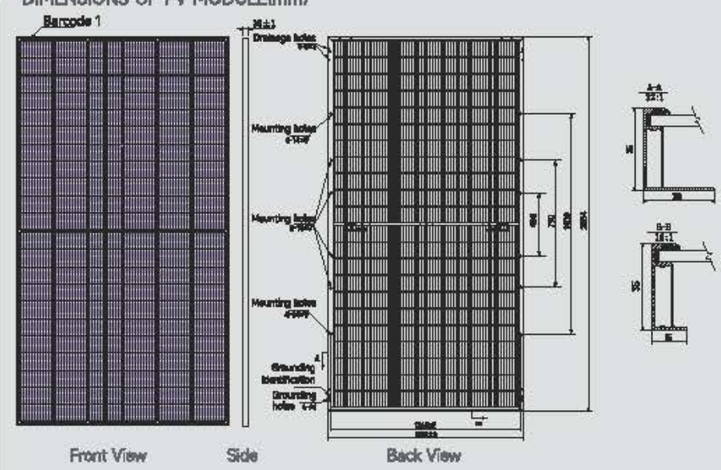
Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.

670W MAXIMUM POWER OUTPUT

21.57% MAXIMUM EFFICIENCY

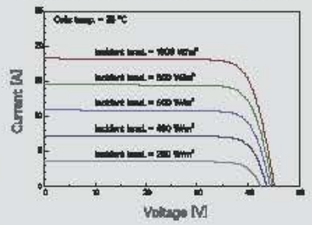
70±10% BIFACIALITY

DIMENSIONS OF PV MODULE(mm)

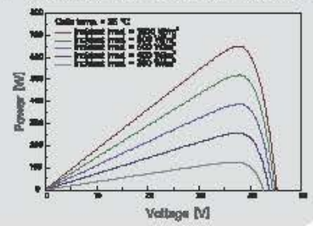


*Remark: customized frame color and cable length available upon request.

I-V CURVES OF PV MODULE(650W)



P-V CURVES OF PV MODULE(650W)



ELECTRICAL CHARACTERISTICS

MODULE TYPE	HNM8-THLDD132-650/M		HNM8-THLDD132-655/M		HNM8-THLDD132-660/M		HNM8-THLDD132-665/M		HNM8-THLDD132-670/M	
STC/NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Power Watt Pmax(W)*	650	488.6	655	492.3	660	496.10	665	499.8	670	503.6
Maximum Power Voltage Vmp(V)	37.70	35.20	37.90	35.4	38.10	35.60	38.30	35.7	38.50	35.90
Maximum Power Current Imp(A)	17.26	13.88	17.29	13.92	17.33	13.95	17.37	13.99	17.41	14.03
Open Circuit Voltage Voc(V)	45.20	42.40	45.40	42.60	45.60	42.80	45.80	43.00	46.00	43.20
Short Circuit Current Isc(A)	18.27	14.75	18.32	14.79	18.37	14.83	18.42	14.87	18.47	14.91
Module Efficiency (%)	20.92		21.09		21.25		21.41		21.57	

*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

5% Maximum Power (Pmax)	683Wp	688Wp	693Wp	698Wp	704Wp
Maximum Efficiency STC (%)	21.97%	22.14%	22.31%	22.46%	22.65%
15% Maximum Power (Pmax)	748Wp	753Wp	759Wp	765Wp	771Wp
Maximum Efficiency STC (%)	24.06%	24.25%	24.43%	24.62%	24.80%
25% Maximum Power (Pmax)	813Wp	819Wp	825Wp	831Wp	838Wp
Maximum Efficiency STC (%)	26.16%	26.36%	26.56%	26.76%	26.96%

WORKING CONDITIONS

Maximum System Voltage	1500VDC
Operating Temperature	-40°C~+85°C
Maximum Fuse Rating	35A
Rear Side Mechanical Load	2400Pa
Front Side Mechanical Load	5400Pa
Safty Class	Class II

TEMPERATURE RATINGS

NMOT	44°C±2°C
Temperature coefficient of Pmax	-0.34%/°C
Temperature coefficient of Voc	-0.29%/°C
Temperature coefficient of Isc	0.06%/°C
Refer. Bifacial Factor	70±10%

MECHANICAL DATA

Solar cells	Mono P-Type
Cells orientation	132 (6x22)
Module dimension	2384x1303x35 (With Frame)
Weight	38.6±1Kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction Box	IP68, 3 diodes
Cables	4 mm², 400mm (with connectors)
Connectors	MC4 or Compatible

*Please refer to regional datasheet for specified connector.

PACKAGING CONFIGURATION

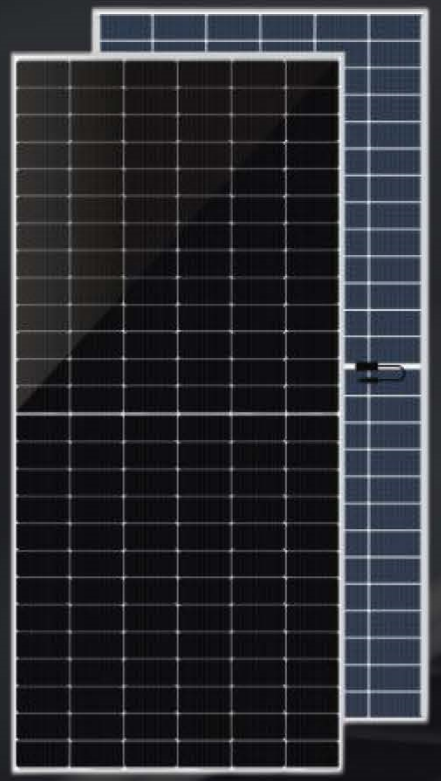
Container	40'HQ
Piece/Box	31
Piece/Container	558

*Customized packaging is available upon request.

Solar America

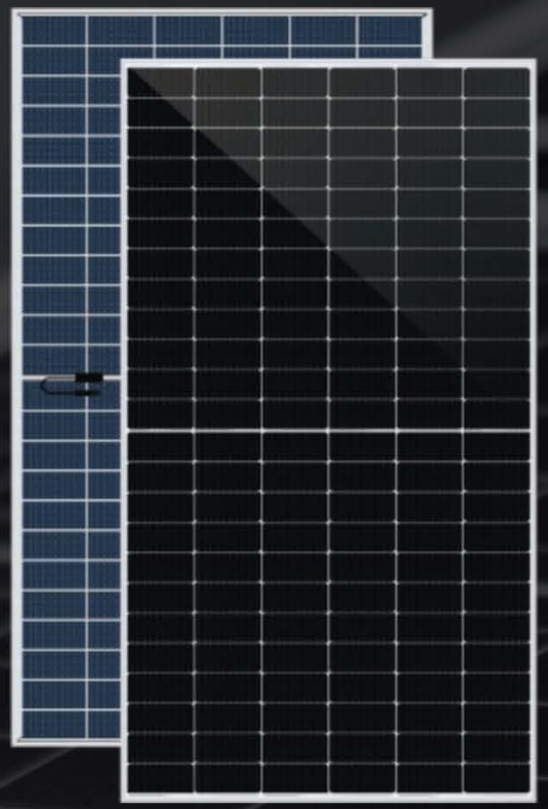
2024

Monocrystalline P - Type, PV Solar Modules



610 W

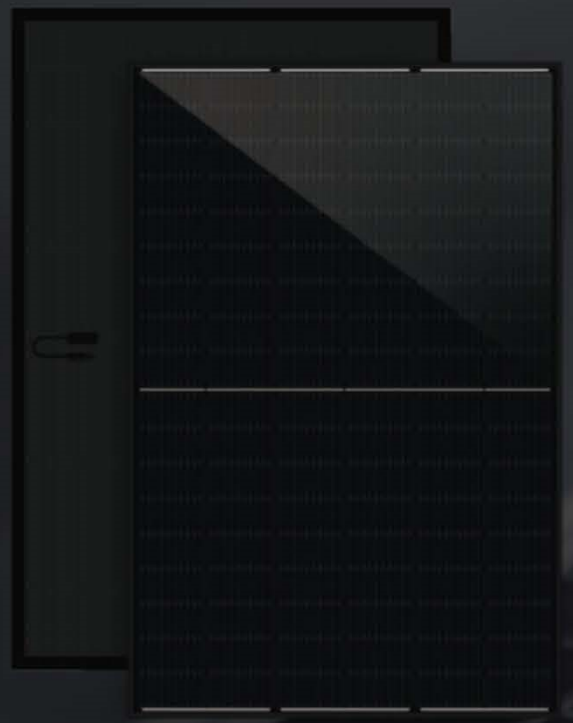
HNM7-SHDB156 SERIES



550 W

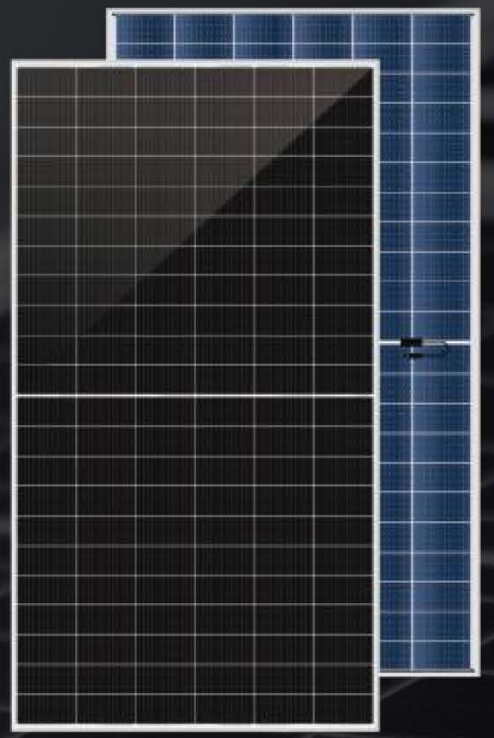
HNM7-SHDB144 SERIES

Monocrystalline P - Type, PV Solar Modules



420 W

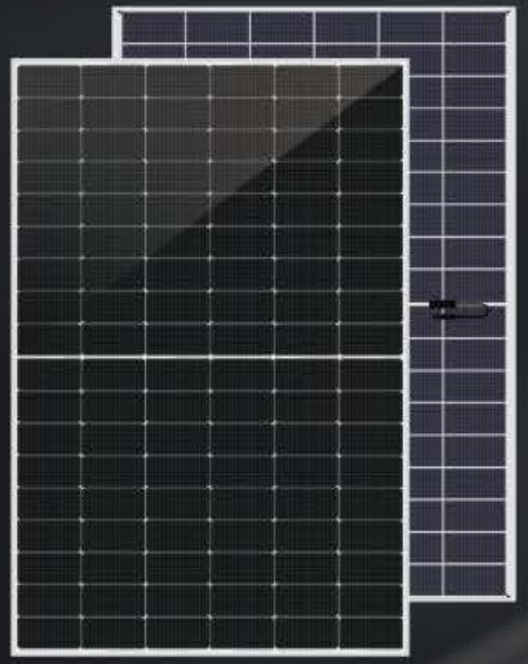
HNM7-SHLD108 SERIES



670 W

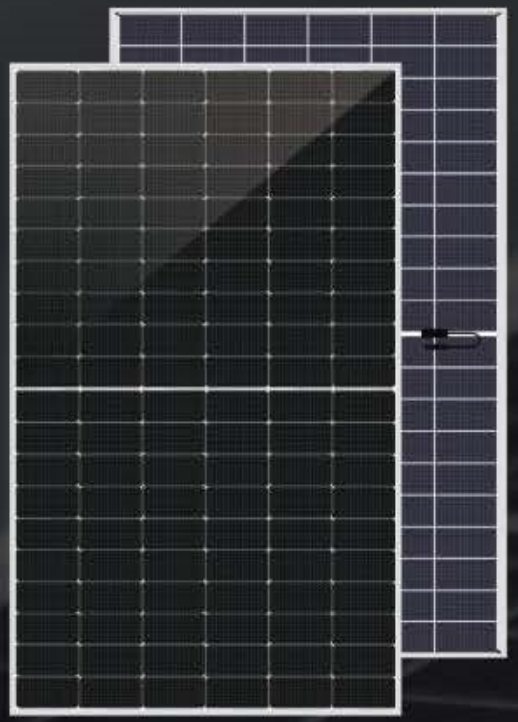
HNM8-THLDD132 SERIES

Monocrystalline N - Type, PV Solar Modules



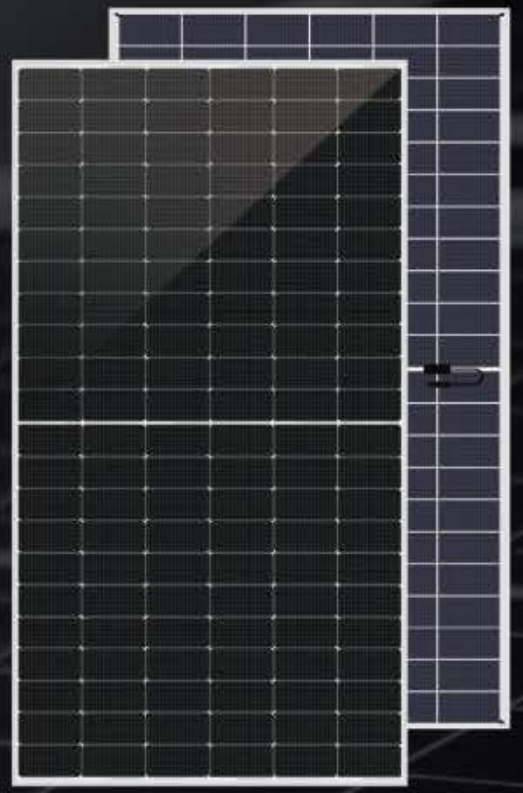
415-435W

HNM7-UHLDD108 Series



470-490W

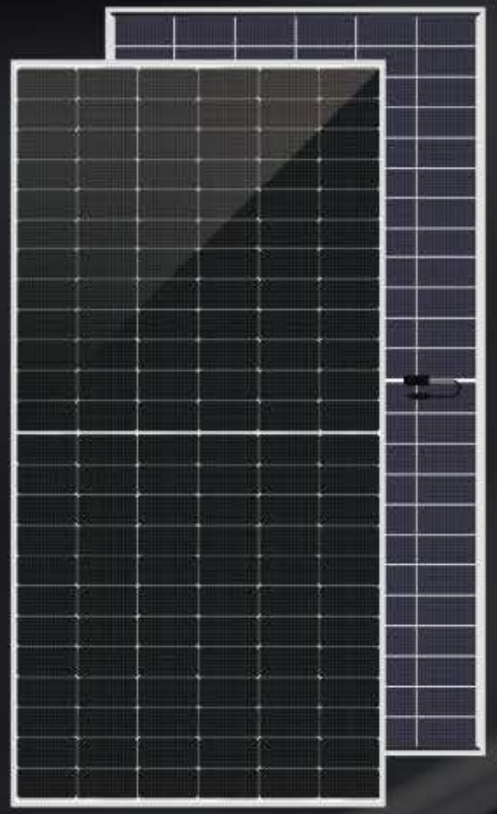
HNM7-UHLDD120 Series



515-535W

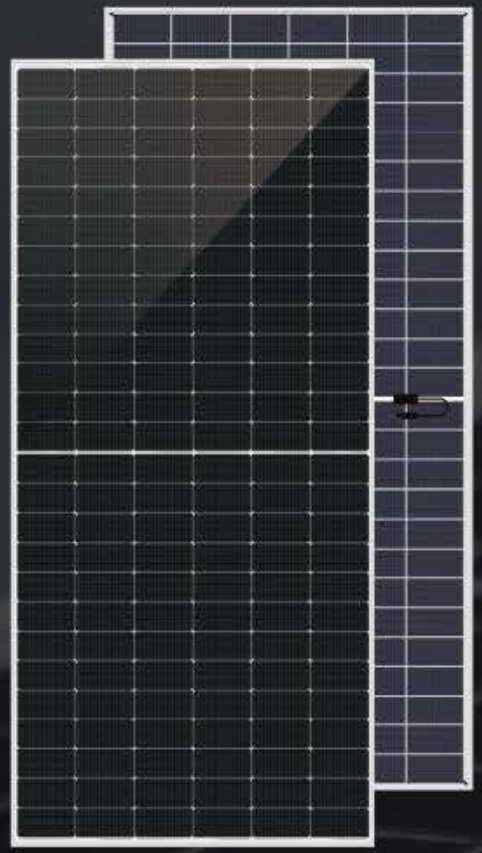
HNM7-UHLDD132 Series

Monocrystalline N - Type, PV Solar Modules



565-585W

HNM7-UHLDD144 Series



610-630W

HNM7-UHLDD156 Series

705-725W

HNM8-UHLDD132 Series

Domestic Project References

58 MW
California

35 MW
New Jersey

28 MW
Texas

50 MW
Alaska

PART 3 Advantages

PART THREE

Assembled in the U.S.A.

Process improvement driven by R&D

Intensive technical training

Ongoing automation initiative

Thorough management process

Fast Delivery & Reliable Logistics

With South Carolina factory and California warehouse in the U.S., we can ensure timely delivery to meet your needs.

Flexible domestic logistic capability

- ship from both coasts
- time efficient solutions

Sufficient storage space

- 20,000 sqf

On-site office staffs

- easily accessible assistance

Partners

POWERSTORE
Solar and Storage Specialists

C&D Clean Energy

PHONO

COLITE
TECHNOLOGIES

BYD

Fortune Energy™

SOLAR AUCTION.com

SOLAR UMBRELLA
Supply Chain Management

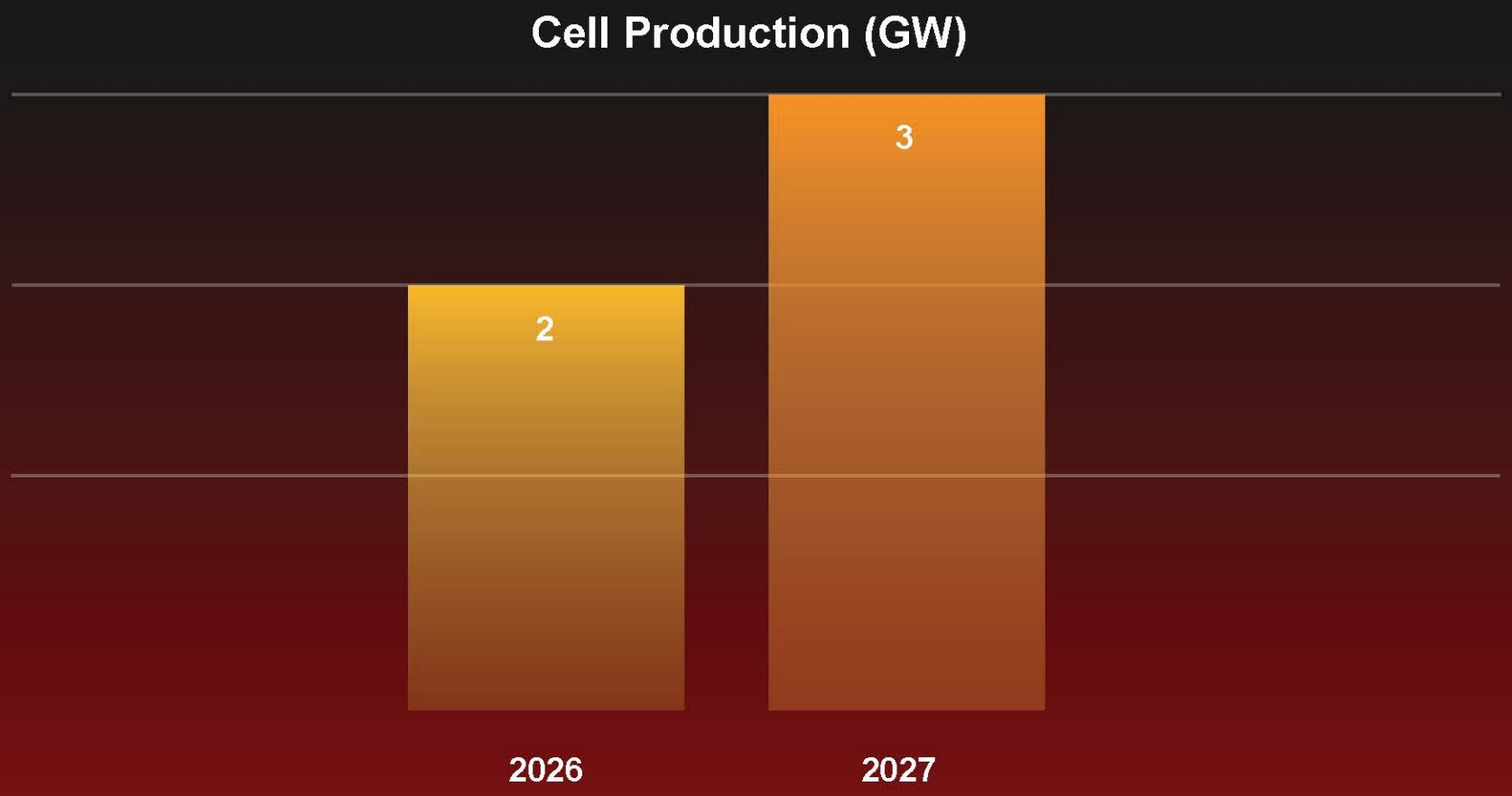
SOLAR


PART
4
Plans
PART FOUR

Future Module Capacity

Challenges & Future Plans

We plan to produce cells domestically to achieve the goal of increasing domestic content % and thus obtain U.S. Domestic Content Bonus Credit:



Future Plans - Areas of Opportunites

As we are enhancing the production capacities of both PV modules and cells, we are simultaneously exploring additional opportunities and devising strategies to forge a more promising future

Joint Lab with Hytekocean

Dedicate to advancing the field of hydrogen energy, with a focus on the production and application of hydrogen power.

Energy Storage

Offer cutting-edge energy storage solutions and delve into the integration of photovoltaic systems with energy storage technologies.

Lightweight Modules

Expand the application scope of solar modules to meet the needs of project with low load bearing capacity.

Sustainability

commits to solar energy to provide sustainable solutions and minimize environmental life cycle impacts by achieving the following goals:

- ensuring energy security
- mitigating climate change