JHPVTECH
晶弘能源

Energy Storage System

Providing high quality energy storage

BRAND HISTORY

Company Vision

1.Serve JHPV DealersIn Local Market

2.Assist & Guide The Local EPC

3.Top Solar Cell Technology

4.Experienced After-sales Team

4S+ Service

1.4S:Sales, Service, Sparepart, Solution.

2.Local Team Service.

3.Installation Technical Guide.

4.In stock

2015

Ningbo Jinghong Energy Technology Co., Ltd. was established, Cell printing and production

2017

The Cell production capacity was 400MW, and the two-year export sales exceeded from $3 million to $10 million

2022

Established Cutting silicon wafers company and module production base 1.5GW

2023

It established a European branch and a Singapore branch, engaged in Cell and silicon wafer sales

2024

Set sail for the future...

GLOBAL PARTNER

China

阿特斯 · AIKO · DAH Solar 大恒能源 · DMEGC · JA SOLAR 晶澳太阳能

JinKO Solar 晶科能源 · LONGi 隆基 · 高测股份 · RUNERGY 润阳股份 · 晋能控股集团 JINNENG HOLDING GROUP

SUNTECH 尚德电力 · Scenergy · Trinasolar 天合光能 · 通威集团 TONGWEI GROUP · 协鑫 GCL

KEENSTAR 亿晶光电 · 正信光电 ZNSHINESOLAR · 中来股份 JOLYWOOD · TCL

Overseas

ET Towards Excellence · SUNRISE 昊宇光伏 · vikramsolar · PV POWER · swelect

HR SOLAR SOLUTION building a greener future

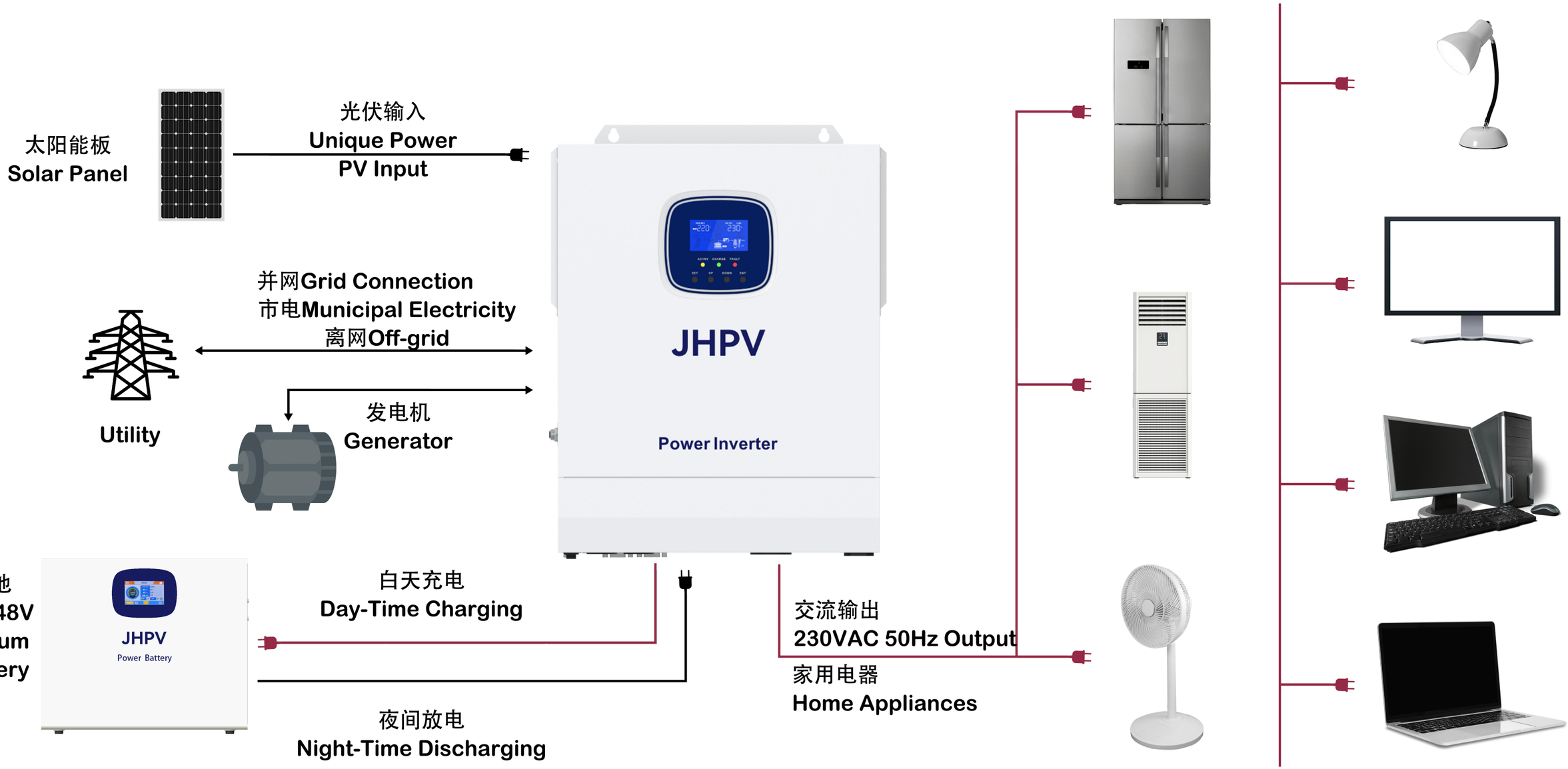
CERTIFICATION

MORE SECURE INSURANCE SERVICES

TUV Rheinland of North America, Inc. US

TÜVRheinland® CERTIFIED

Solar Cell System Off Grid Type



Performance characteristics

Efficiency
Advanced MPPT with up to 99.9% efficiency
Multiple charge and discharge modes are available

User-Friendly
Industrial design with a modern aesthetic look
Easy to install and simple to use

Reliable
Outputs high-quality pure sine wave AC power
Reliable output for long periods at rated power

All in one
Support for many types of batteries
Supports Li-ion battery BMS communication

Safety
360 degrees of security from hardware tosoftware
Multiple safety approvals available

Intelligent
Exclusive Li-ion battery BMS dual activation
Support for remote monitoring of operating

Technical parameters

MODEL	JHPV-5.5P-Ultra	CAN BE SET
INVERTER		
Rated Output Power	5,500W	
Max.Peak Power	11,000VA	
Rated Output Voltage	230Vac（single phase/three phase-paralleled）	✓
Load Capacity of Motors	4HP	
Rated AC Frequency	50Hz/60Hz	✓
Waveform	Pure Sine Wave	
Switch Time	10ms（typical）	
Parallel Capacity	1-6	

Technical parameters

JHPV TECH

MODEL	JHPV-5.5P-Ultra	CAN BE SET
BATTERY		
Battery Type	Lead-acid / Li-ion / User defined	✓
Rated Battery Voltage	48V	
Voltage Range	40～60Vdc	✓
Max.MPPT Charging Current	100A	✓
Max.Mains/Generator Charging Current	60A	✓
Max.Hybrid Charging Current	100A	✓
PV INPUT		
Num. of MPPT Trackers	1	
Max.PV Array Power	6,000W	
Max.Input Current	22A	
Max.Voltage of Open Circuit	500Vdc	
MPPT Voltage Range	120-450Vdc	
UTILITY/ GENERATOR INPUT		
Input Voltage Range	UPS mode：170～280Vac；APL mode：90～280Vac	✓
Frequency Range	50/60Hz	
Bypass Overload Current	40A	
EFFICIENCY		
MPPT Tracking Efficiency	99.9%	
Max. Battery Inverter Efficiency	92%	
GENERAL		
Dimensions	426*322*124mm (1.40*1.06*0.41ft)	
Weight	10.5kg (23.15lb)	
Protection Degree	IP20, Indor Only	
Operating Temperature Range	-10℃~55℃	
Noise	≤60dB	
Cooling Method	Internal Fan	
Warranty	1.5 Years	
COMMUNICATION		
Embedded Interfaces	RS485 / USB / Dry contact	✓
External Modules（Optional）	Wi-Fi / GPRS	✓
CERTIFICATION		
Safety	CE(IEC 62109-1)/ cETL(UL 1741 C22.2 NO.107.1) /FCC/SAA	
EMC	EN61000	
RoHS	Yes	

Maximized Energy Harvesting

Intelligent Energy Dynamics

Engineered for Versatility

Simplified Interaction

Technical parameters

Model		JH-25K-100	JH-30K-100	JH-36K-100	JH-40K-100	JH-50K-100
PV Input						
Recommended Max. Input Power	[kW]	37.50	45.00	54.00	60.00	75.00
Start-up Voltage	[V]	135	135	135	135	135
Max. DC Input Voltage*	[V]	1000*	1000*	1000*	1000*	1000*
Rated DC Input Voltage	[V]	620	620	620	620	620
MPPT Voltage Range*	[V]	200-850*	200-850*	200-850*	200-850*	200-850*
No. of MPP Trackers		4	4	4	4	4
No. of DC Inputs per MPPT		2	2	2	2	2
Max. Input Current	[A]	30x4	30x4	30x4	30x4	30x4
Max. Short-circuit Current	[A]	40x4	40x4	40x4	40x4	40x4
Battery Side						
Battery Type		Lithium Battery (with BMS)				
Battery Voltage Range		135-750				
Maximum Charging/Discharge Current		100/100				

Technical parameters

JHPV TECH

Model		JH-25K-100	JH-30K-100	JH-36K-100	JH-40K-100	JH-50K-100
Grid Side						
Rated Output Power	[kW]	25.00	30.00	36.00	40.00	50.00
Max. Output Apparent Power	[kVA]	27.50	33.001)	39.60	44.00	55.00
Max. Input Apparent Power**	[kVA]	30.00	36.00	43.50	48.00	60.00
Max. Charging Power of Battery	[kW]	25.00	30.00	36.00	40.00	50.00
Rated AC Voltage	[V]	3L/N/PE; 220/380V;230/400V;240/415V				
Rated AC Frequency	[Hz]	50/60				
Max. Output Current	[A]	42.00	50.002)	60.00	66.00	83.00
Power Factor		0.8 leading ⋯0.8 lagging				
Max. Total Harmonic Distortion		<3% @Rated output power				
DCI		<0.5%In				
Back-up Side						
Rated Output Power	[kW]	25.00	30.00	36.00	40.00	50.00
Max. Output Apparent Power	[kVA]	27.50	33.00	39.60	44.00	55.00
Max. Output Current	[A]	42.00	50.00	60.00	66.00	83.00
On/Off-grid Switching Time	[ms]	<20ms				
Rated Output Voltage	[V]	3L/N/PE; 220/380V;230/400V;240/415V				
Rated Output Frequency	[Hz]	50/60				
Voltage Harmonic Distortion		<3% @Linear load				
Generator Side						
Max. Input Apparent Power**	[kVA]	30.00	36.00	43.50	48.00	60.00
Max. Charging Power of Battery	[kW]	25.00	30.00	36.00	40.00	50.00
Rated AC Voltage	[V]	3L/N/PE; 220/380V;230/400V;240/415V				
Rated AC Frequency	[Hz]	50/60				
Max. Input Current	[A]	43.50	52.20	63.00	69.60	87.00
Efficiency						
Max. Efficiency		98.8%	98.8%	98.8%	98.8%	98.8%
European Efficiency		98.3%	98.3%	98.3%	98.3%	98.3%
Protection						
Integrated Protection		DC reverse polarity protection / Battery input reverse connection protection /Insulation resistance protection / Surge protection /Over-temperature protection / Residual current protection /Islanding protection / AC over-voltage protection /Overload protection / AC short-circuit protection				
General Data						
Over Voltage Category		PV: II Main: III				
Dimensions	[W×H×D mm]	800×620×300				
Weight	[KG]	72				
Protection Degree		IP65				
Standby Self-consumption	[W]	<15				
Topology		Transformerless				
Operating Temperature Range	[°C]	-30~60				
Relative Humidity	[%]	0~100				
Operating Altitude	[m]	3000 (>3000m Derating)				
Cooling		Smart fan				
Noise Level	[dB]	<50				
Display		OLED & LED				
Communication		CAN, RS485, WiFi/LAN (Optional)				

* PV Max. Input voltage is 850V, otherwise inverter will be waiting;
** Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery;
1) AS 4777.2, VDE-AR-N 4105: 30.0kVA; 2) AS 4777.2, VDE-AR-N 4105: 43.5A

JHPV TECH

Low voltage series lithium battery modules

JHB-L1 series rack type lithium iron phosphate battery

Product introduction >>

This product is composed of high-quality lithium iron phosphate cells (by series and parallel) and advanced BMS management system. It can be used as an independent DC power supply or as a "basic unit" to form a variety of energy storage lithium battery power systems, with high reliability and longer life. It can be used as backup power supply of communication base station, backup power supply of digital center, household energy storage power supply, industrial energy storage power supply, etc. It can be seamlessly connected with main equipment such as UPS and photovoltaic power generation.

Product parameter >>

Model	JHB25.6V-200AH	JHB48V-100AH-R	JHB51.2V-100AH-R
Nominal voltage(V)	25.6	48	51.2
Nominal capacity(Ah)	210	105	105
Nominal energy capacity(kWh)	5.3	5	5.3
Operating voltage range(V)	22.4-29.2	52-54.75	40-57.6
Recommended charging voltage(V)	28	52.5	56
Recommended discharge cut-off voltage(V)	24	45	45
Standard Charging Current(A)	100	50	50
Maximum continuous charging current(A)	200	100	100
Standard Discharge Current(A)	100	50	50
Maximum discharge current(A)	200	100	100
Applicable temperature(℃)	-30~60(10~35recommended)		
Permissible humidity range(%RH)	0~95Nocondensation		
Storage temperature(℃)	-20~65(10~35recommended)		
Protection level	IP20		
Cooling method	Naturalaircooling/smartfan		
Life cycles	80% DOD 6000+times		
Maximum size (D*W*H)mm	596*545*155	540*545*155	580*492*165
Weight(kg)	48	44.5	50

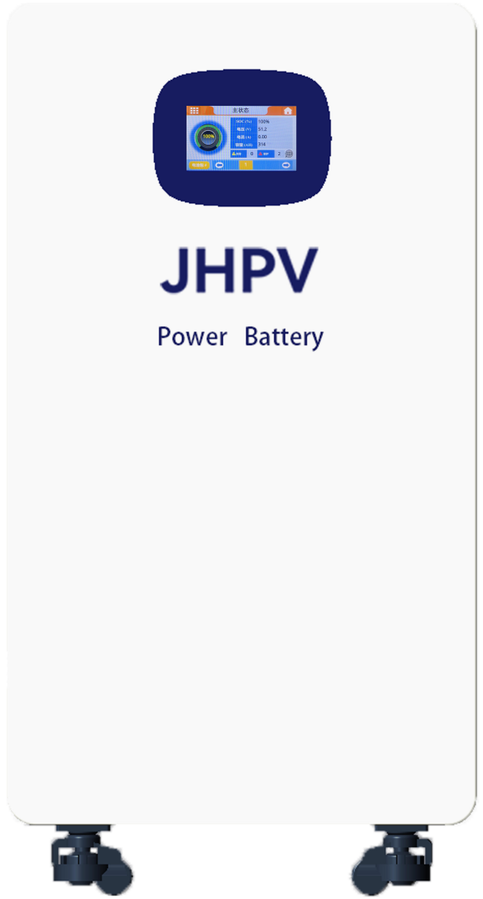
Note: The above data is for reference only and is subject to change without prior notice. Customized requirements such as Bluetooth and 1C charging and discharging need to be communicated with engineers.

Low voltage series lithium battery modules

JHB-L2 series rack type lithium iron phosphate battery

Product introduction >>

- Wall-hanging installation, save space
- Multiple in parallel, easy for expand,Automatic addressing, no need to dial a code
- Standard configuration with LCD display, real time knowing battery status,Screen direct selection of inverter communication
- Environmentally friendly non-polluting materials, free of heavy metals, green and environmentally friendly
- Standard cycle life is more than 6000 times
- Remote viewing error, online software upgrade



Product parameter >>

Model	JHB48V-314AH-W	JHB51.2V-314AH-W
Nominal voltage (V)	48	51.2
Nominal capacity (Ah)	330	330
Nominal energy (kWh)	15.8	16.9
Operating voltage range	42-54.75	40-57.6
Recommended charging voltage (V)	52.5	56
Recommended discharge cut-off voltage (V)	45	45
Standard Charging Current (A)	150	150
Maximum continuous charging current (A)	200	200
Standard Discharge Current (A)	150	150
Maximum discharge current (A)	200	200
Applicable temperature (℃)	-30~60(10~35 recommended)	
Permissible humidity range (%rh)	0~95 No condensation	
Storage temperature (° C)	-20~65(10~35 recommended)	
Class of protection	IP20	
Cooling mode	Natural air cooling	
Cycle number	80% DOD 6000+ times	
Max. dimension of wall-mounted (D x W x H)mm	830*480*230	830*480*230
Weight (kg)	124	130

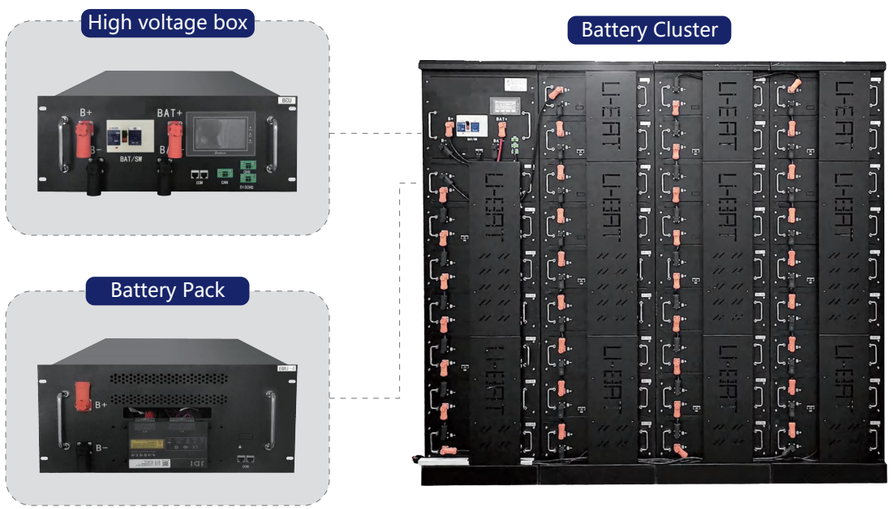
JHPV TECH

LITHIUM BATTERY CLUSTER ENERGY STORAGE SYSTEM

Product Introduction >>

JBP-H2 series battery products are designed for industrial and commercial emergency power supply, peak cutting and valley filling, remote mountainous areas, islands and other weak electric power supply and development of high-voltage large-capacity system. The lithium iron phosphate cell and customized BMS system are used to effectively manage the cell, which has more excellent product performance and safety reliability than the traditional battery. Diversified communication interface and software protocol library, so that the battery system can be directly matched with the mainstream inverter on the market communication. The product has many charge and discharge cycles, high power density and long service life. Unique design and innovation in compatibility, energy density, dynamic monitoring, safety, reliability and product appearance can bring users a better energy storage application experience.

- Modular design, higher integration, saving installation space
- High performance lithium iron phosphate anode material, good consistency, design life of more than 10 years
- One-button switch, front operation, front wiring, convenient installation and maintenance, convenient operation
- Various functions, over temperature alarm protection, over charge and over discharge protection, short circuit protection
- Strong compatibility, can be seamlessly connected with UPS, photovoltaic power generation and other main equipment
- Various communication interfaces, such as CAN/RS485, CAN be customized according to customer needs to facilitate remote monitoring of the system
- Flexible use, can be used as an independent DC power supply, can also be used as a basic unit to form a variety of specifications of energy storage power system and container energy storage system. It can be used as backup power supply of communication base station, backup power supply of digital center, home energy storage power supply, industrial energy storage power supply, etc



Lithium battery pack parameter table >>

Model	JBP9650	JBP48100	JBP32150	JBP96100	JBP48200	JBP32300
Cell Type (Ah)	52			105		
Nominal energy (kWh)	5			10		
Nominal capacity(Ah)	52	104	156	105	210	300
Nominal voltage(VDC)	96	48	32	96	48	32
Operating voltage range(VDC)	87~106.5	43.5~53.2	29~35.5	87~106.5	43.5~53.2	29~35.5
Workingtemperature(℃)	-20~65					
Protection level	IP20					
Reference weight (kg)	47.1			86.6		
Reference size(D*W*H)mm	630*475*162			640*510*252		

Note: The battery pack is used with the system, the cycle life is ≥5000 working conditions, 25℃, 80%DOD; special voltage can be consulted and selected; the system with different voltage and capacity registration can be configured according to the batterypack specifications.

Lithium battery cluster voltage platform parameter table >>

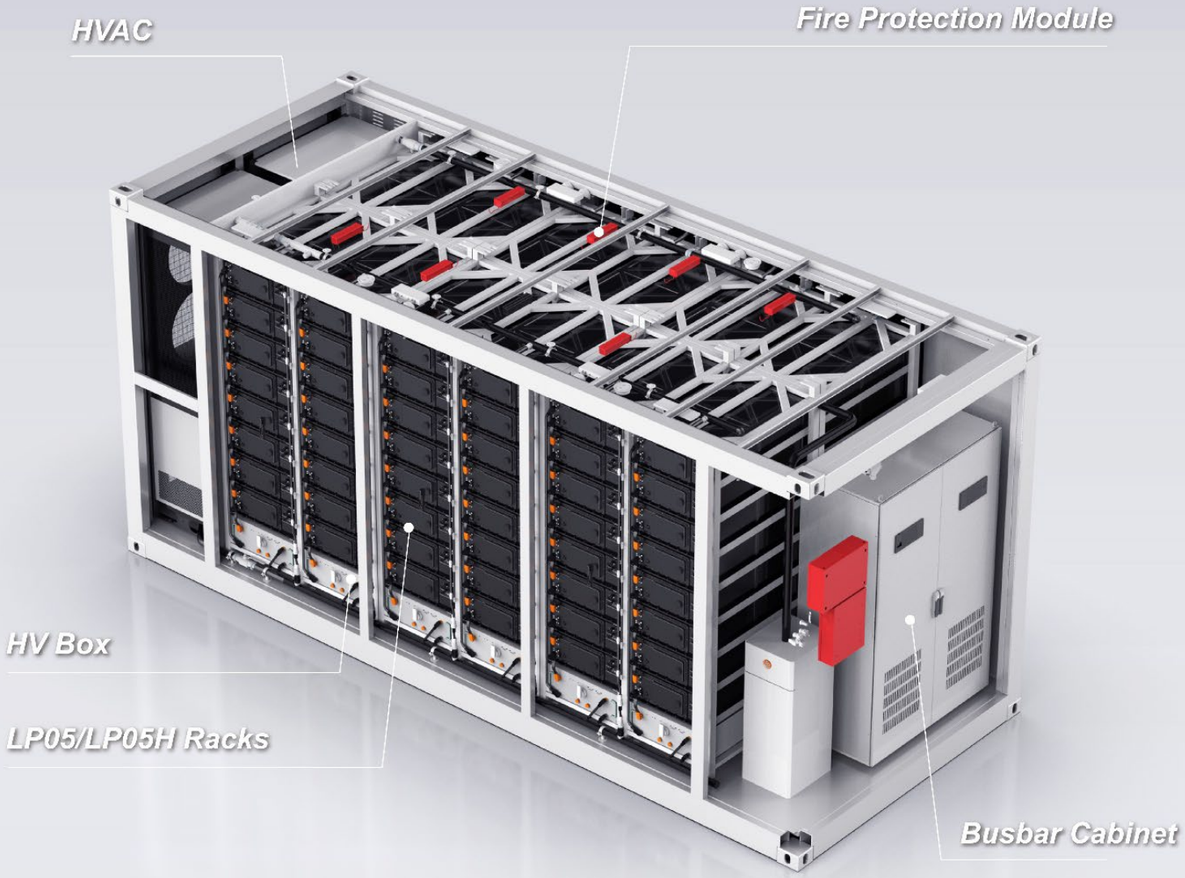
Model	Nominal voltage(V)	Nominal capacity(Ah)	Operating voltage range(VDC)	Recommended charge and discharge current (A)
JBP 96100/200/300	96	100/200/300	87~106.5	50/100/150
JBP 192100/200/300	192		174~213	
JBP 220100/200/300	220		200~245	
JBP 288100/200/300	288		260~319.5	
JBP 360100/200/300	360		325~400	
JBP 384100/200/300	384		348~426	
JBP 480100/200/300	480		435~532	
JBP 512100/200/300	512		464~568	
JBP 576100/200/300	576		522~639	
JBP 672100/200/300	672		609~745.5	

Note: See attachment for detailed parameters, special voltage and capacity can be customized.

C&I ESS Cabinet

Model	JH-232-280	JH-372-280
Cell	LiFePO4	
con?guration	1P260S	1P416S
Rated capacity	280 Ah	280 Ah
Rated power	232 kWh	372 kWh
Rated voltage	832.0 Vdc	1331.2 Vdc
Operating voltage	650.0 Vdc~949.0 Vdc	1040.0 Vdc~1518.4 Vdc
Rated charging/discharging current	158	184
Maximum charging/discharging current	280A	
Communication	CAN/RS485	
PCS parameters		
Rated output power	125-135KW	200-215KW
Waveform distortion rate	< 3 %	
Output voltage	400V	690V
Permissible voltage deviation	-10 % ~ +15 %	
Rated grid frequency	50 Hz/60 Hz	
System parameter		
Dimensions (LxWxH)	1150mm*1610mm*2450mm	1300mm*1300mm*2300mm
Weight(Ton)	2.7/T	3.5/T
IP rating	IP55	
Maximum circulation ef?ciency	90%	
Auxiliary power supply	External power supply	
Anti-corrosion grade	C4	
Operating humidity range	0~95%(non-condensing)	
Operating Temperature Range	-30°C~50°C	
Maximum working altitude	5000 m(>3000m Derogation)	
Battery cabinet cooling method	liquid cooling	
Fire safety con?guration	pack grade perluorohexanone	
Communication	4G/RS485/LAN	

BESS Container (DC side)



Cell Pack **System**

System Parameters		
model	JH-3.72MWH	JH-5MWH
Cell Type	Lithium Iron Phosphate	Lithium Iron Phosphate
Magnification	≤0.5P	≤0.5P
Combination	10 clusters	12 clusters
Rated energy	3727.36kWh	5015.96kWh
Nominal voltage	1331.2V	1331.2V
Operating voltage range	1040V～1518.4V	1040V~1518.4V
Dimensions (length x width x height)	6058×2800×2996mm	6058*2438*2896mm
Weight	≤36t	50t
Operating temperature range	Charging: 0~50℃, Discharging: -20~50℃	Charging: 0~50℃, Discharging: -20~50℃
Operation and maintenance method	Walk-in maintenance	Non-walk-in maintenance
Maximum operating altitude	≤4000m	≤4000m
Temperature control method	Liquid Cooling	Liquid Cooling
Fire protection system	Heptafluoropropane / perfluorohexanone +water fire fighting	Heptafluoropropane / perfluorohexanone +water fire fighting
Communication interface	Ethernet, RS485, CAN	Ethernet, RS485, CAN
Communication Protocol	IEC104, IEC61850, Modbus RTUA, ModbusTCP	IEC104, IEC61850, Modbus RTUA ModbusTCP
Protection level	IP54	IP54
standard	GB/T 36276, GB/T 34131	GB/T 36276, GB/T 34131

JHPV TECH

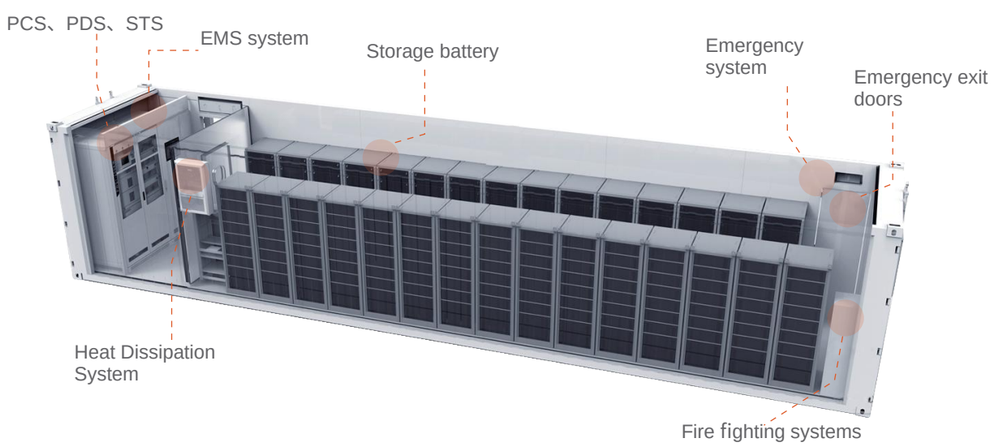
CONTAINERIZED ENERGY STORAGE SYSTEM

Product Introduction >>

The containerized energy storage system includes:BESS, bidirectional power conversion system (PCS), DC conversion system (PDS), microgrid switching system (STS), energy management system (EMS), auxiliary power distribution system, air conditioning system, and fire protection.

Performance advantage >>

- According to customer needs, the type and capacity of the battery system can be flexibly configured
- PCS adopts modular, power frequency overall architecture, simple maintenance, flexible configuration, and can realize multiple parallel machines
- Supports on-grid and off-grid operation mode, seamless switching, and supports black start
- EMS unattended system, local control, cloud monitoring operation, with highly customizable functions
- With peak shaving and valley filling, demand response, anti-reverse flow operation, backup power supply, command response and other modes
- With a complete gas fire extinguishing system and automatic fire monitoring and alarm system, sound and light alarm and fault transmission
- With a complete heat dissipationand temperature control systemto ensure thatthe temperature of the battery compartment is within the optimal working range
- The access control system has remote control and on-site operation functions



Product parameter >>

Model	10ft	20ft	40ft
Output voltage (V)	380/400±15%		
Grid frequency (Hz)	50/60(±2.5)		
Output power (kW)	50~100	50~500	250~630
Battery capacity(kWh)	50~400	200~1500	800~3000
Battery Type	Lithium iron phosphate battery		
Dimensions (D*W*H)mm	Inner:2831*2352*2385	Inner:2352*5898*2385	Inner:2352*12032*2385
	Outer:2438*2991*2591	Outer:2438*6058*2591	Outer:2438*12192*2591
Protection level	IP54		
Humidity range (%RH)	0~95		
Altitude (m)	3000		
Operating temperature (℃)	-20~50		
Battery voltage range (V)	250~850		
Maximum DC current (A)	200	750	1500
Connection method	3P4W		
Power factor	-1~1		
Communication method	RS485,CAN,Ethernet		
Isolation method	Power frequency isolation		

Note: The above data are subject to change without prior notice.

Project Pictures

- Rated Energy of LFP Battery: 71MW/131MWh
- Module: 76.8NESP250
- Rack: LFP 1152V 250Ah Total：455 Racks
- Container: 22*45ft
- Application: Wind and storage
- Commissioning Date：2023 Nov.
- Location: Abilene, Texas

- Rated Energy of LFP Battery: 71MW/129MWh
- Module: 76.8NESP250
- Rack: LFP 1152V 250Ah Total：448 Racks
- Container: 22 units of CON20 and CON30
- Application: PV and storage
- Commissioning Date：2023 Nov.
- Location: Texas

Project Pictures

- Rated Energy of LFP Battery: 71MW/129MWh
- Module: 76.8NESP250
- Rack: LFP 1152V 250Ah Total：448 Racks
- Container: 22 units of CON20 and CON30
- Application: PV and storage
- Commissioning Date：2023 Dec.
- Location: Texas

- BESS Rated Power: 100MW;
- Rated Energy of LFP Battery: 200MWh;
- Application: PV and storage
- Commissioning Date: 2023

JH-M10DS144C 575~595W

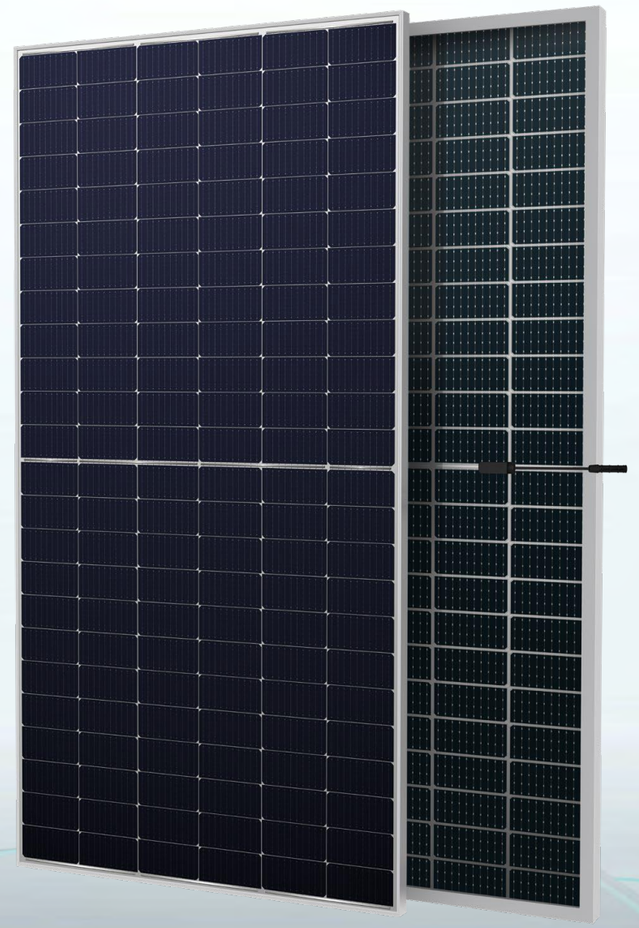
N-22.84% Efficiency

575~595W (182x182 mm Half-Cut Cell) 144 pcs

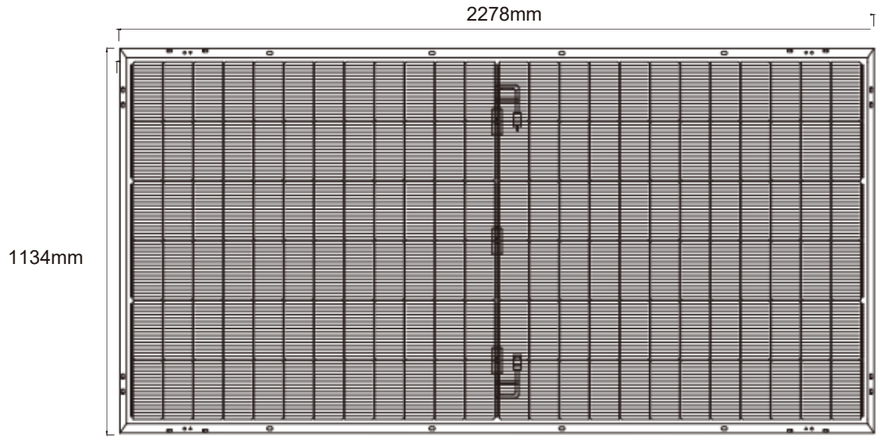
N-TYPE Bifacial Silver Frame

Dimension: 2278 mm x 1134mm x 30 mm

Weight: 31.7 kg



Product Appearance



Electrical parameters at Standard Test Conditions (STC*) & Nominal Operating Cell Temperature (NOCT*)

Module Type	575W / 436W	580W / 440W	585W / 444W	590W / 448W	595W / 452W
Test Environment	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT
Power output tolerances Pmax(W)	(0,+5)	(0,+5)	(0,+5)	(0,+5)	(0,+5)
Module efficiency(%)	22.26	22.45	22. 65	22.84	23.03
Voltage at Pmax Vmpp(V)	43.73 / 40.75	43.88 / 40.93	44.02 / 41.11	44.16 / 41.29	44.30 / 41.47
Current at Pmax Impp(A)	13.15 / 10.70	13.22 / 10.75	13.29 / 10.80	13.36 / 10.85	13.43 / 10.90
Open-circuit voltage Vco(V)	50.75 / 49.59	52.95 / 49.77	53.15 / 49.96	53.35 / 50.15	53.55 / 50.34
Short-circuit current Ico(A)	13.89 / 11.33	13.95 / 11.38	14.01 / 11.43	14.07 / 11.48	14.13 / 11.55

*STC: 1000 W·m-2 irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-
*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

GENERAL CHARACTERISTICS

Dimensions (L / W / H)	2278 mm / 1134mm / 30 mm
Weight	31.7kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	36
Number of pallets per 40' container	20
Pieces per Container	720

OPERATING CONDITIONS

Max. system voltage	1500 VDC
Max. series fuse rating*	30 A
Operating temperature range	- 40°C to 85°C
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter/velocity)	25 mm / 23 m·s-1

*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 ± 2
Temperature coefcient of Pmax	γ	% / °C	-0.29
Temperature coefcient of Voc	β	% / °C	-0.25
Temperature coefcient of Isc	α	% / °C	0.045

*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

CONSTRUCTION MATERIALS

Cell (material / quantity)	monocrstalline silicon / 6 x 24
Glass (material / thickness)	low-iron tempered glass / 2+2 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm^2

JH-G12RDS132C 620~640W

N-23.5% Efficiency

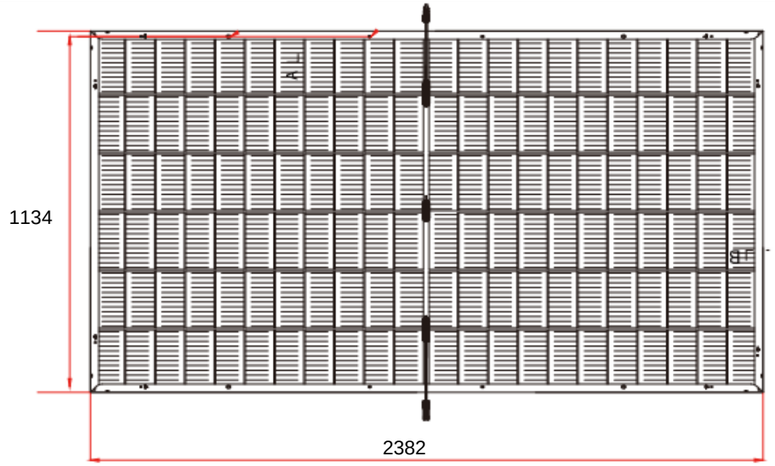
620~640W (182x210 mm Half-Cut Cell) 132 pcs

N-TYPE bifacial Silver Frame

Dimension: 2382 mm x 1134mm x 30 mm

Weight: 33.1 kg

Product Appearance



Electrical parameters at Standard Test Conditions (STC*) & Nominal Operating Cell Temperature (NOCT*)

Module Type	620W / 474 W	625W / 478W	630W / 482W	635W / 486W	640W / 490W
Test Environment	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT
Power output tolerances Pmax(W)	(0,+5)	(0,+5)	(0,+5)	(0,+5)	(0,+5)
Module efficiency(%)	23.0	23.1	23.3	23.4	23.5
Voltage at Pmax Vmpp(V)	41.40 / 38.80	41.70 / 39.10	42.00 / 39.40	42.30 / 39.70	42.60 / 40.00
Current at Pmax Impp(A)	14.99 / 12.20	15.00 / 12.21	15.01 / 12.22	15.02 / 12.23	15.03 / 12.24
Open-circuit voltage Vco(V)	49.60 / 47.10	49.90 / 47.30	50.20 / 47.70	50.50 / 48.10	50.80 / 48.50
Short-circuit current Ico(A)	15.91 / 12.82	15.92 / 12.83	15.93 / 12.84	15.94 / 12.85	15.95 / 12.86

*STC: 1000 W·m-2 irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-
*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

GENERAL CHARACTERISTICS

Dimensions (L / W / H)	2382 mm / 1134mm / 30 mm
Weight	33.1 kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	36
Number of pallets per 40' container	20
Pieces per Container	720

OPERATING CONDITIONS

Max. system voltage	1500 VDC
Max. series fuse rating*	30 A
Operating temperature range	- 40°C to 85°C
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter/velocity)	25 mm / 23 m·s-1

*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 ± 2
Temperature coefcient of Pmax	γ	% / °C	-0.29
Temperature coefcient of Voc	β	% / °C	-0.25
Temperature coefcient of Isc	α	% / °C	0.045

*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

CONSTRUCTION MATERIALS

Cell (material / quantity)	monocrstalline silicon / 6 x 22
Glass (material / thickness)	low-iron tempered glass / 2+2 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm^2

JH-M10DS156C 620~640W

N-22.72% Efficiency

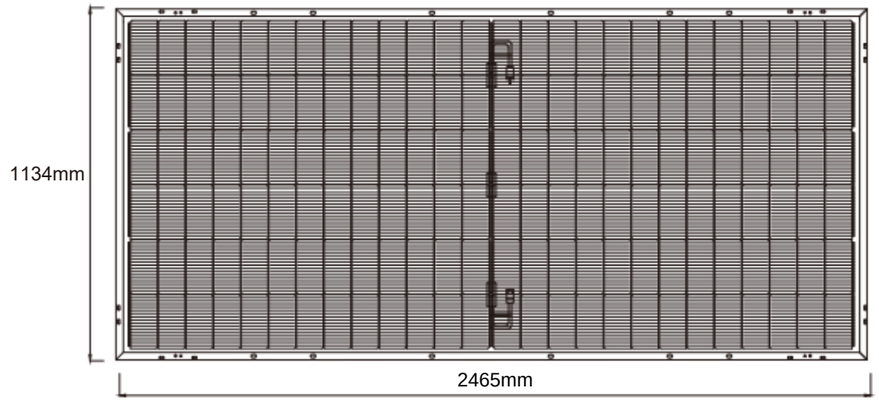
620~640W (182x182 mm Half-Cut Cell) 156 pcs

N-TYPE bifacial Silver Frame

Dimension: 2465 mm x 1134mm x 30 mm

Weight: 35 kg

Product Appearance



Electrical parameters at Standard Test Conditions (STC*) & Nominal Operating Cell Temperature (NOCT*)

Module Type	620W / 465.74W	625W / 469.50W	630W / 473.26W	635W / 477.01W	640W / 480.76W
Test Environment	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT
Power output tolerances Pmax(W)	(0,+5)	(0,+5)	(0,+5)	(0,+5)	(0,+5)
Module efficiency(%)	22.18	22.35	22.54	22.72	22.90
Voltage at Pmax Vmpp(V)	47.37 / 44.05	47.54 / 44.21	47.70 / 44.36	47.86 / 44.51	48.02 / 44.66
Current at Pmax Impp(A)	13.09 / 10.57	13.15 / 10.62	13.21 / 10.67	13.27 / 10.72	13.33 / 10.77
Open-circuit voltage Vco(V)	57.37 / 53.93	57.50 / 54.05	57.63 / 54.17	57.76 / 54.29	57.89 / 54.37
Short-circuit current Ico(A)	13.74 / 11.16	13.80 / 11.22	13.86 / 11.29	13.92 / 11.35	13.98 / 11.41

*STC: 1000 W·m-2 irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-
*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

GENERAL CHARACTERISTICS

Dimensions (L / W / H)	2465 mm / 1134mm / 30 mm
Weight	35 kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	36
Number of pallets per 40' container	18
Pieces per Container	648

OPERATING CONDITIONS

Max. system voltage	1500 VDC
Max. series fuse rating*	30 A
Operating temperature range	- 40°C to 85°C
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter/velocity)	25 mm / 23 m·s-1

*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 ± 2
Temperature coefcient of Pmax	γ	% / °C	-0.29
Temperature coefcient of Voc	β	% / °C	-0.25
Temperature coefcient of Isc	α	% / °C	0.045

*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

CONSTRUCTION MATERIALS

Cell (material / quantity)	monocrstalline silicon / 6 x 26
Glass (material / thickness)	low-iron tempered glass / 2+2 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm^2

JH-G12DS132C 700~720W

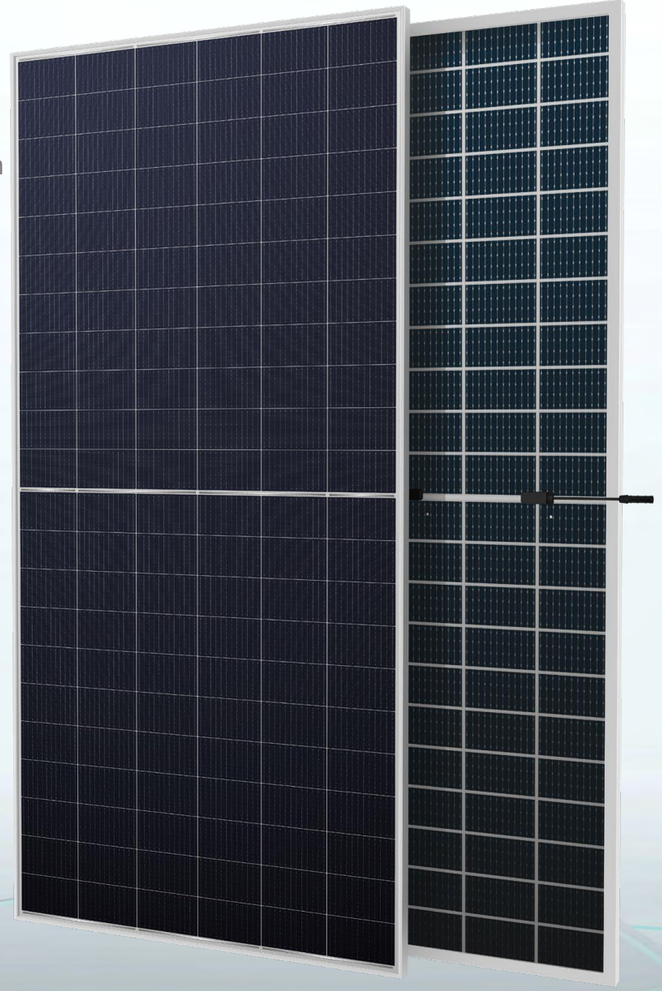
N-23.18% Efficiency

700~720W (210x210 mm Half-Cut Cell) 132 pcs

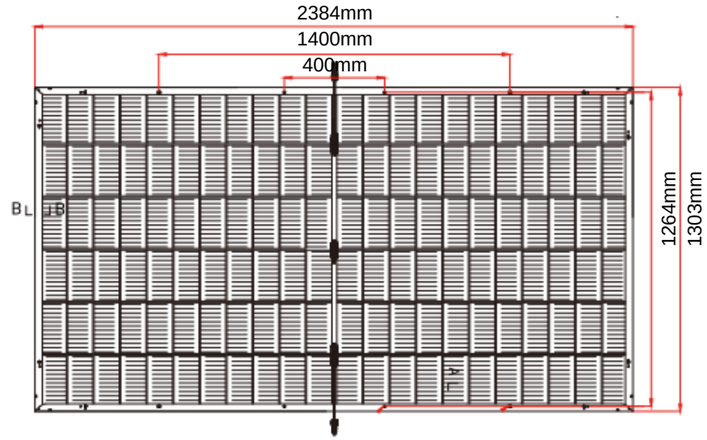
N-TYPE bifacial Sliver Frame

Dimension: 2384 mm x 1303mm x 33 mm

Weight: 38.7 kg



Product Appearance



Electrical parameters at Standard Test Conditions (STC*) & Nominal Operating Cell Temperature (NOCT*)

Module Type	700W / 534W	705W / 540W	710W / 543W	715W / 547W	720W / 551W
Test Environment	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT	STC / NOCT
Power output tolerances Pmax(W)	(0,+5)	(0,+5)	(0,+5)	(0,+5)	(0,+5)
Module efficiency(%)	22.53	22.70	22.86	23.02	23.18
Voltage at Pmax Vmpp(V)	40.50 / 38.00	40.70 / 38.30	40.90 / 38.50	41.10 / 38.70	41.30 / 38.80
Current at Pmax Impp(A)	17.29 / 14.05	17.33 / 14.08	17.36 / 14.12	17.40 / 14.14	17.44 / 14.19
Open-circuit voltage Vco(V)	48.60 / 46.10	48.80 / 46.30	49.00 / 46.50	49.20 / 46.70	49.40 / 46.90
Short-circuit current Ico(A)	18.32 / 14.76	18.36 / 14.80	18.40 / 14.83	18.44 / 14.86	18.49 / 14.90

*STC: 1000 W·m-2 irradiance, 25°C cell temperature, AM 1.5 spectrum according to EN 60904-
*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

GENERAL CHARACTERISTICS

Dimensions (L / W / H)	2384 mm / 1303mm / 33 mm
Weight	38.7 kg

PACKAGING SPECIFICATIONS

Number of modules per pallet	33
Number of pallets per 40' container	18
Pieces per Container	594

OPERATING CONDITIONS

Max. system voltage	1500 VDC
Max. series fuse rating*	35 A
Operating temperature range	- 40°C to 85°C
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter/velocity)	25 mm / 23 m·s-1

*DO NOT CONNECT FUSE IN COMBINER BOX WITH TWO OR MORE STRINGS IN PARALLEL CONNECTION.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 ± 2
Temperature coefcient of Pmax	γ	% / °C	-0.30
Temperature coefcient of Voc	β	% / °C	-0.24
Temperature coefcient of Isc	α	% / °C	0.045

*NOCT: open-circuit module operation temperature at 800 W·m-2 irradiance, 20°C ambient temperature, 1 m·s-1 wind speed.

CONSTRUCTION MATERIALS

Cell (material / quantity)	monocrstalline silicon / 6 x 22
Glass (material / thickness)	low-iron tempered glass / 2+2 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm^2

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