Power Cube

Modular Industrial and Commercial ESS Power Cube Series Power Cube EC215-100K-M01







System efficiency is 5-8% higher Industry leading in battery than the industry average Significantly improve system investment ROI.



Integrated design, convenient transportation, reduce installation costs.



temperature consistency Effectively extending battery life by more than 10%.



Real-time data monitoring and fault recording, early warning, fault location.



Pack-level combustible gas detection and fire protection.



The large capacity cell reduces the system series-parallel connection.



Support for parallel, flexible capacity expansion.



Support grid-connected and off-grid operation.

Industrial and Commercial Energy Storage Application Scenarios

- Industrial and commercial energy storage is a typical application of distributed energy storage system on the user side, mainly composed of photovoltaic modules, hybrid PCS, battery packs, loads, etc., mostly modular scalable design;
- The main application scenarios include factories and shopping malls, photovoltaic energy storage charging stations, and microgrid+ energy storage, and new application scenarios have appeared in data centers, 5G base stations, heavy trucks switching, port shore power, and so on;
- The main application modes include grid-connected mode, pure off-grid mode, and integrated grid-connected and off-grid mode;
- The main electrical system architectures are AC-coupled and DC-coupled.







Micro-grid

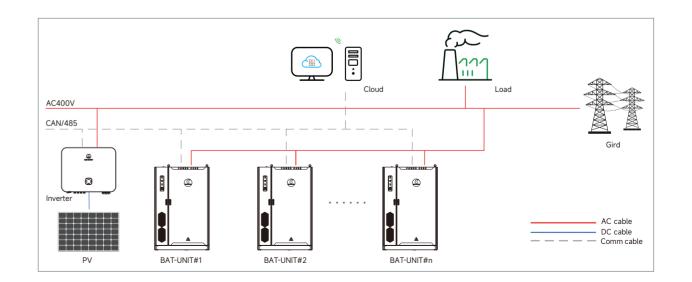






Power Cube EC215-100K-M01 Technical parameters

Technical parameters:	Power Cube EC215-100K-M01		
	Battery configuration		
Battery type	LFP 280 Ah		
PACK configuration	14.336 kWh / 1P16S		
Battery system configuration	215 kWh / 1P240S		
Voltage Range	672-864 Vdc		
	AC parameters (on-grid)		
Rated power	100 kW		
Maximum charge and discharge power	110 kW		
Rated grid voltage	400, 3W+N+PE		
Grid voltage range	360-440 Vac		
rated current	150 A		
Maximum Current	160 A		
Rated grid frequency	50 Hz		
Allowable grid frequency fluctuations	±5 Hz		
Power Factor Range	-1 ~ +1		
iTHD	<3% (Rated power)		
	System parameters		
Size of battery cabinet	1600*1080*2270 mm (W*D*H)		
Weight of battery cabinet	~2400 kg		
Protection level	IP55		
Operating temperature range	-30~+50°C (>45°CReduction)		
Operating humidity range	0~95% (No condensation)		
Max. working altitude	3000 m		
Cooling mode	Intelligent air-cooled		
Isolation mode	No transformer		
Communication interface	Ethernet		
Communication protocol	Modbus TCP		
System certification	EN IEC62477-1, EN IEC62619, IEC60730 Annex H, EN IEC61000-6-2, EN IEC61000-6-4, UN38.3		
PCS certification	GB/T34120, EN/IEC62477-1, IEC61000-6-2/-4, VDE 4105, EN50549-1, UK G99, Italy CEI 0-21		



NFPP50160118-EA60/NFM19161124-EA24 Technical parameters

Small aluminum shell/soft pack series of sodium-ion battery cells NFPP50160118-EA60/NFM19161124-EA24





Passed TÜV SÜD safety tests including projectile fire test, overcharge/overdischarge, short circuit, thermal abuse, and nail penetration

Maximum battery cell surface temperature ≤60°C during nail penetration test



Ultra-low temperature endurance

-20°C, 94% capacity retention rate

-60°C, 81% capacity retention rate



Ultra-high rate

8C discharge capacity retention rate ≥90%

Customizable solutions supporting 20C+ rates for specific applications



Projected cycle life exceeds 2,500 cycles at 80% SOH (NFM) Projected cycle life exceeds 6,000 cycles at 80% SOH (NFPP)



Convenient and safe storage and transportation

Capable of 100% capacity recovery after discharging to 0V, allowing safe storage and transportation at zero-voltage state

Maintains 40% SOC at shipment with self-discharge to zero voltage in up to 2.5 years

Technical parameters:	NFM19161124-EA24	NFPP50160118-EA60
Standard capacity	24Ah	60Ah
Operating voltage	1.5~3.95V (≥0°C) ,1.2~3.95V (< 0°C)	1.5~3.4V (≥0°C) ,1.2~3.4V (<0°C)
Nominal voltage	2.95V@0.5P	2.83V@0.5P
Internal resistance of battery	< 1.2mΩ	< 0.5mΩ
Monthly self-discharge	≤5.0%/month	≤5.0%/month
Operating temperature (charging)	-10~60°C	-10~60°C
Operating temperature (discharging)	-60~60°C	-60~60°C
Battery weight	570±30g	1580±100g
Storage temperature	-60~60°C	-60~60°C
Battery size	Thickness: 19mm Width: 161mm Height: 124mm	Width: 160±0.3mm Height: 118.6±0.5mm Thickness: 50±0.3mm
Operating altitude	< 5000m	< 5000m
Cycle life	≥2500Cycles, 80%SOH	> 6000Cycles, 80%SOH

Application areas:

The small aluminum shell / soft pack series of sodium-ion battery cells feature excellent safety performance, light weight, high energy density, flexible design, and long cycle life. They can be flexibly configured while offering an outstanding cost-performance ratio, making them highly valuable for applications in light-duty power or power-type fields.

Application scenarios:

Two-wheelers, three-wheelers, low-speed electric vehicles, start-stop power supplies, and other applications requiring higher energy density and greater flexibility.









Two-wheelers

Three-wheelers

Low-speed electric vehicles Start-stop power supply

Panda

Residential Single-phase Energy Storage System Panda Series Panda 3680S~6000S-5HP~30HP









The Lithium Iron Phosphate (LFP) cell secures safe and reliable operation.



The 5 KWh module adopted enables variable capacity range of 5-30 kWh.



The automatic isolation of the faulty battery module secures smooth system operation.



The switching time between on-off grid less than 10 ms secures Uninterruptable Power Supply for the load.



The APP-based remote monitoring offers easy maintenance and unlimited function expansion.



The built-in Smart Grid Management module enables power grid dispatching.



The Degree of Protection at IP66 makes it suitable for various harsh environments for application.

Residential Energy Storage Application Scenarios: Energy Storage + X

- · The residential energy storage system addresses stable power demand and offers functions such as leveraging price differentials between peak and off-peak hours to reduce electricity costs and enhance the self-consumption rate of photovoltaic power generation. It serves as an integrated solution tailored for household scenarios.
- · The core of the residential energy storage system is the battery pack, BMS, and energy storage inverter, which is paired with household PV to form a residential photovoltaic energy storage system, mainly including the battery pack, BMS, hybrid PCS, and PV modules.
- Residential energy storage is developing rapidly in the European market. Europe's higher level of electricity prices combined with peak and valley price differentials, as well as the incentive policy and declining energy storage cell prices, contribute to the favorable economic viability of residential energy storage.







Residential Photovoltaic Energy Storage



Itaic Fnerov Storage



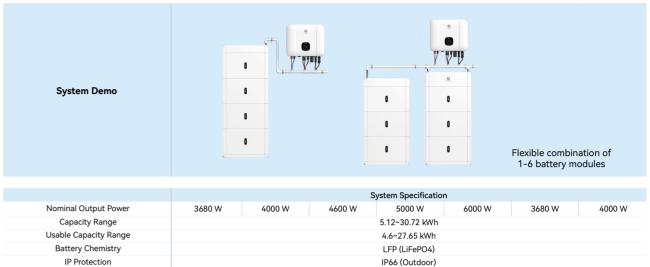






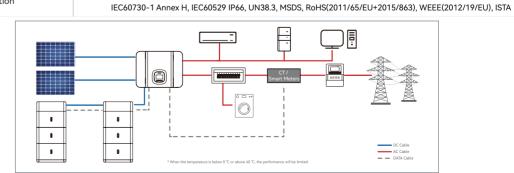


Panda 3680S~6000S-5HP~30HP Technical parameters



	Inverter Technical Specification							
Model	Venus 3680-S1	Venus 4000-S1	Venus 4600-S1	Venus 5000-S1	Venus 6000-S1	Venus 3680-S2	Venus 4000-S2	
Phase	Single Phase							
Max. PV Input Voltage	600 V							
MPPT Voltage Range				100 V~550 V				
Max. PV Input Current			16 A / 16 A			16A		
Max. PV Input Power	8000 W	9000 W	9000 W	9000 W	9000 W	4500 W	4500 W	
Max. MPPT Short-circuit Current		20 A / 20 A 20A						
Number of Independent MPPT			2				1	
Start-up Voltage Range	120 V							
Max. Charging/Discharging Current	100 A							
Max. Charging/Discharging Power				5000 W				
Nominal Output Voltage on Grid	220 V,230 V,240 V (comply with local regulations)							
Output Voltage Range on Grid	180 ~ 276 V							
Rated Grid Output Frequency on Grid				50 Hz/60 Hz				
Max.AC output Power	3680 W	4000 W	4600 W	5000 W	6000 W	3680 W	4000 W	
Nominal AC Output Voltage	230 V							
Communication	CAN2.0/RS485, WIFI/4G(optional)							
Display	LCD & APP							
Dimension(W*H*D) mm	540 x 450 x185							
	EN IEC62109-1, EN IEC62109-2, IEC61683, IEC61727, IEC62116, IEC60068, EN IEC61000-6-1,							
Certification	EN IEC61000-6-3, IEC60529 IP66, EN50549-1, EN50530, Italy CEI 0-21, Germany VDE4105, UK G98, G99,				3, G99,			
	Spain U	UNE217001, UNE2	17002, NTS 2.1, R	oHS(2011/65/EU+	2015/863), WEEE(2012/19/EU), ISTA,	UKCA	

	Battery Technical Specification					
Module Model	Limestone 5H-P	Limestone 10H-P	Limestone 15H-P	Limestone 20H-P	Limestone 25H-P	Limestone 30H-P
Module Capacity	5.12 kWh	10.24 kWh	15.35 kWh	20.48 kWh	25.64 kWh	30.72 kWh
Usable Capacity	4.6 kWh	9.21 kWh	13.81 kWh	18.43 kWh	23.04 kWh	27.65 kWh
Nominal Voltage	51.2 V					
Max. Charging/Discharging Power	2.5 kW	5 kW	5 kW	5 kW	5 kW	5 kW
Operating Temperature Range	-20 ∼ +50 °C					
Dimension(W*H*D) mm	650 x 620 x 180	650 x 980 x 180	650 x 1340 x 180	650 x 1700 x 180	650 x 1340 x 180 650 x 980 x 180	650 x 1340 x 180 650 x 1340 x 180
Certification	IEC62619, IEC63056, EN IEC61000-6-1, IEC61000-6-3, EN IEC62040-1, EN IEC62477-1,					

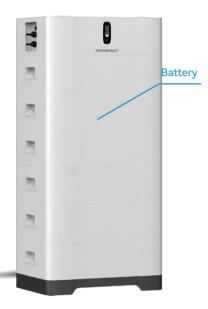


Panda

Residential Three-phase Energy Storage System Panda Series Panda 8000T~15kT-10HS~60HS









The Lithium Iron Phosphate (LFP) cell secures safe and reliable operation.



The module adopted enables variable capacity range of 10-60 kWh.



The APP-based remote monitoring offers easy maintenance and unlimited function expansion.



The automatic isolation of the faulty battery module secures smooth system operation.



The switching time between on-off grid less than 10 ms secures Uninterruptable Power Supply for the load.



The built-in Smart Grid Management module enables power grid dispatching.



The Degree of Protection at IP66 makes it suitable for various harsh environments for application.

Residential Energy Storage Application Scenarios: Energy Storage + X

- The residential energy storage system addresses stable power demand and offers functions such as leveraging price differentials between peak and off-peak hours to reduce electricity costs and enhance the self-consumption rate of photovoltaic power generation. It serves as an integrated solution tailored for household scenarios
- · The core of the residential energy storage system is the battery pack, BMS, and energy storage inverter, which is paired with household PV to form a residential photovoltaic energy storage system, mainly including the battery pack, BMS, hybrid PCS, and PV modules.
- Residential energy storage is developing rapidly in the European market. Europe's higher level of electricity prices combined with peak and valley price differentials, as well as the incentive policy and declining energy storage cell prices, contribute to the favorable economic viability of residential energy storage.



Residential Fnerov Storage





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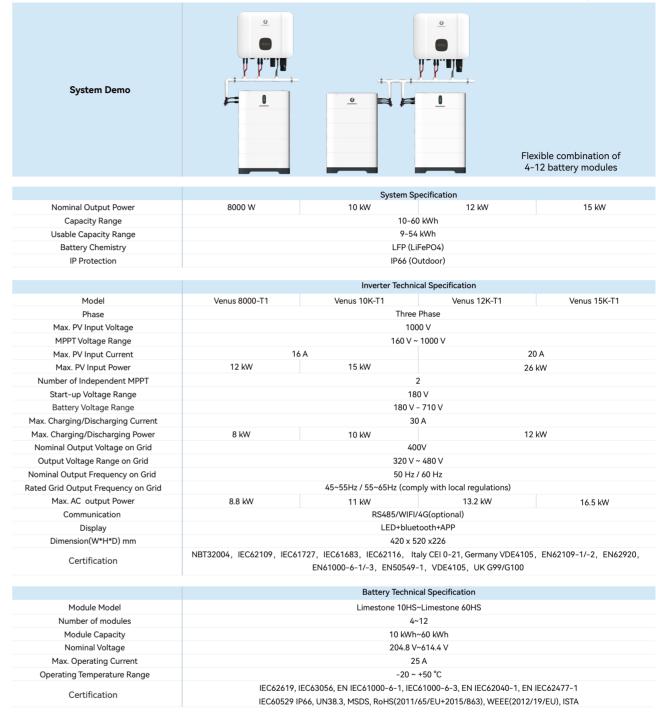


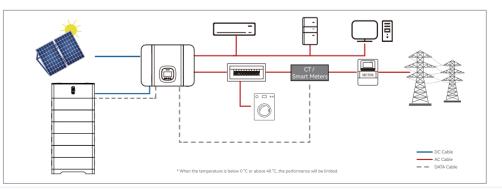
Residential Photovoltaic Energy Savings Residential Ph





Panda 8000T~15kT-10HS~60HS Technical parameters





Mercury Residential Single-phase On-grid PV Inverter Mercury Series Mercury 3000-S1~6000-S1







Intelligent adaptive weak power grid to avoid frequent disconnection.



Independent dual MPPT tracking adaptable to different installation scenarios.



This product supports remote parameter setting, fault diagnosis and software upgrade.



The Degree of Protection at IP66 makes it suitable for various harsh environments for application.



This product with a variety of monitoring modes supports RS485, Wi-Fi/Ethernet/GPRS.



Wide DC voltage range and longer power generation duration.

On-Grid application scenarios and application modes

- · Distributed photovoltaic systems mainly include photovoltaic modules, inverter, electricity meters, etc., and are mostly designed in a series and
- The main application scenarios of Mercury are households, photovoltaic sheds, etc;
- · The application modes mainly include three types: full self-use, self-use and balance sold to grid, and fully sold to grid.



www.zonergy.com \boxtimes asia_pacific@zonergy.com \boxtimes europe@zonergy.com

Mercury 3000-S1~6000-S1 Technical parameters

Technical parameters:	Mercury 3000-S1	Mercury 3680-S1	Mercury 4000-S1	Mercury 4600-S1	Mercury 5000-S1	Mercury 6000-	
				Input (DC)			
aximum panel input power recommended	4900 Wp	5520 Wp	6000 Wp	6900 Wp	7500 Wp	9000 Wp	
Maximum input voltage	4700 110	3320 WP	0000 WP	600 V	7300 WP	7000 110	
Start-up input voltage		120 V					
Rated input voltage				360 V			
MPPT voltage range				100 V-550 V			
Full load DC voltage range				250 V-520 V			
Number of independent MPPT				2			
Strings				1/1			
Maximum Input current				16 A/16 A			
Maximum short circuit current				20 A /20 A			
Rated output power	3000 W	3680 W	4000 W	Output (AC) 4600 W	5000 W	6000 W	
Maximum output current	13 A	16 A	17.4 A	20 A	21.7 A	26 A	
Nominal grid voltage	13 A	10 A		PE, 220Vac, 230Vac, 2		20 A	
Nominal AC voltage range				VAC (according to lo			
Rated grid frequency			100 VAC-270	50 Hz/ 60 Hz	cai stailuaiu)		
Grid frequency range			/5 Hz_55 Hz/5/	Hz-66 Hz (according	to local standard)		
Active power adjustable range			43 112 33 112/34	0~100%	to local standard)		
Total harmonic component (current)				<3%			
Power Factor			1 (adjustable	e range: 0.8 leading ~	0.8 lagging)		
Martin marffetter				Efficiency	07.000		
Maximum efficiency		97.60%	97.70%		97.80%		
European weighted efficiency MPPT efficiency		97.10%		97.20% >99.9%	97.30%	6	
				Protection			
Insulation impedance detection				yes			
DC reverse connection protection				yes			
Ground fault monitoring				yes			
Over-current protection				yes			
DC switch		yes					
AFCI protection				optional			
				General parameters			
Ambient temperature range				-25 ~ + 60 °C			
Stand-by loss		<10 W					
Topology				no transformer			
Degrees of protection				IP66			
Relative Humidity range allowed		0~100%					
Communication			RS	485, WIFI / 4G (option	nal)		
Protection level				Class I			
Maximum altitude for product operation			3000m(>2	2000m Rating reducti	on occurs)		
Connection mode of current sensor		external					
Noise	<29 dB						
Weight				11 kg			
Cooling mode				natural cooling			
Dimension (mm)	350*350*155						
Display	1		LED indica	tor light, Bluetooth /	WIFI + APP		
				Other			
Certification	EN IEC6210	09-1, EN IEC62109-2,	IEC61683, IEC61727,	IEC62116, IEC60068,	EN IEC61000-6-1, EI	N IEC61000-6-3,	
Certification	EN50530, I	EN50530, IEC60529 IP66, RoHS(2011/65/EU+2015/863), WEEE(2012/19/EU), ISTA, CQC NB/T32004, GB/T3740			004, GB/T37408		
Warranty				5 Years			

Apollo

Residential Three-phase On-grid PV Inverter Apollo Series Apollo 8000–T1~15K–T1







DC to AC capacity ratio can reach as high as 1.5 times.

(IP66



DC arcing detection function can be selected to eliminate potential fire hazards.



The Degree of Protection at IP66
makes it suitable for various harsh
environments for application.

The product supports output
of 1.1 times overload.
This effectively increases
power generation.



The adaptive control algorithm adopted ensures the product fit for unstable grid.

Flexible monitoring modes support RS485, Wi-Fi and GPRS.

On-Grid application scenarios and application modes

- Distributed photovoltaic systems mainly include photovoltaic modules, inverter, electricity meters, etc., and are mostly designed in a series and scalable manner;
- The main application scenarios of Apollo include households, industrial and commercial roofs, residential buildings, PV+(BIPV, transportation, agriculture, gas stations, water plants, carports, etc.), microgrids, etc;
- · The application modes mainly include three types: full self-use, self-use and balance sold to grid, and fully sold to grid.





Apollo 8000-T1~15K-T1 Technical parameters

Technical parameters:	Apollo 8000-T1	Apollo 10K-T1	Apollo 12K-T1	Apollo 15K-T1		
		Input param	eters (DC)			
fax. panel input power recommend (kW)	12	15	18	22.5		
Max. DC input voltage (V)		110				
Max. input current of each MPPT (A)	1	16	20			
Short circuit current of each MPPT (A)		25	30			
No. of MPPT		2	2			
Strings		+1	2+2	2		
Start-up voltage (V)		18	0			
MPPT Voltage range (V)		160V~	1000			
Full-load MPPT Voltage range (V)		550~	850			
Rated Input Voltage (V)		60	0			
		Output parar	meters (AC)			
Rated output power (kW)	8.8kW@40°C	11kW@40°C	13.2kW@40°C	16.5kW@40°C		
	8kW@45°C	10kW@45°C	12kW@45°C	15kW@45°C		
Max. output power (kW)	8.8	11	13.2	16.5		
Output connection type		3W+PE or 3				
Rated voltage/Voltage range (V)		400/320				
Rated grid frequency	40.5	45~55Hz / 55~ 65Hz (Accord				
Rated output current (A)	12.2	15.2	18.2	22.8		
Maximum output current (A)	13.4	16.7	20.1	25.1		
Power Factor (settable)		> 0.99 @ full power (adjustable ra	0 00 0			
otal Harmonic Distortion THDi (full load)		< 3% (fu	II load)			
MDDT officiency		Efficie				
MPPT efficiency	no	99.9	7/6			
Maximum efficiency Euro. efficiency		1.8%	22.5	0/		
China efficencty		.5%	98.5			
Gillia efficiency	71		98.0 97.8			
		Protection		76		
DC switch		ye.				
Output short circuit protection		ye.				
Power grid fault monitoring		ye				
DC reverse connection detection		ye				
String monitoring		ye				
DC lightning protection						
AC lightning protection	type II type II					
DC insulation impedance detection	**					
AC leakage current detection	yes ves					
Over-temperature protection	yes yes					
DC component monitoring		ye				
Islanding detection		ye				
Smart IV diagnosis		ye				
Auxiliary power supply detection		ye				
Bus voltage monitoring		ye				
PID repair and protection	optional					
Arc fault detection		optio				
Remote upgrade and setup		ye	•			
anti-counterflow meter		optio				
Fault recorded		ye:				
'		-				
		Display and co	mmunication			
Display mode		LED indicator light, Bl	uetooth / WIFI + APP			
Communication mode		RS485, WIFI / 4	4G (optional)			
		General pa				
Dimension (mm) (W×H×D)		518x422	x208.5			
Weight (kg)		20				
Operating temperature range	-25°C ~ +60°C					
Cooling mode	Air colling without fan					
laximum altitude for product operation	3000m (> 2000m Rating reduction occurs)					
Relative Humidity	0~100%					
Input terminal	MC4					
Output terminal	OT/DT terminal (Max. 50mm² cable section)					
Degree of protection	IP66					
Self power consumption at night	<1W					
Noise (dB)	<35					
Topology		no trans	former			
		Oth				
	EN IEC62109-1, EN IEC	C62109-2, IEC61683, IEC61727, IEC	62116, IEC60068, EN IEC61000-6	-2, EN IEC61000-6-4,		
Certification		66, RoHS(2011/65/EU+2015/863),				

NFPP72174205-EA165/NFPP72174205-EA175 Technical parameters

Long cycle/high capacity series sodium-ion battery cell NFPP72174205-EA165/NFPP72174205-EA175





Jltra-safe

Passed TÜV SÜD safety tests including projectile fire test, overcharge/overdischarge, short circuit, thermal abuse, and nail penetration

Maximum battery cell surface temperature ≤60°C during nail penetration test



Ultra-low temperature endurance

- -20°C, 94% capacity retention rate
- -60°C, 81% capacity retention rate



Ultra-high rate

3C discharge capacity retention rate ≥97.2% (90% group standard)
Customizable solutions supporting 20C+ rates for specific applications



Ultra-long life

0.5P charge/discharge cycle at room temperature, 95% capacity retention rate after 1,000 cycles (tested)

Projected cycle life exceeds 6,000 cycles at 80% SOH



Convenient and safe storage and transportation

Capable of 100% capacity recovery after discharging to 0V, allowing safe storage and transportation at zero-voltage state

Maintains 40% SOC at shipment with self-discharge to zero voltage in up to 2.5 years

Technical parameters:	NFPP72174205-EA165	NFPP72174205-EA175
Standard capacity	165Ah (tested 172Ah)	175Ah (tested 182Ah)
Operating voltage	1.5~3.4V (≥0°C) 1.2~3.4V (< 0°C)	1.5~3.4V (≥0°C) 1.2~3.4V (< 0°C)
Nominal voltage	2.83V@0.5P	2.83V@0.5P
Internal resistance of battery	< 0.25mΩ	< 0.2mΩ
Monthly self-discharge	≤5.0%/month	≤5.0%/month
Operating temperature (charging)	-10~60°C	-10~60°C
Operating temperature (discharging)	-60~60°C	-60~60°C
Battery weight	4700±100g	4650±100g
Storage temperature	-60~60°C	-60~60°C
Battery size	Width: 173.6±0.3mm Height: 206.8±0.5mm Thickness: 71.7±0.5mm	Width: 173.6±0.3mm Height: 206.8±0.5mm Thickness: 71.5±0.5mm
Operating altitude	<6000m	< 6000m
Cycle life	> 8000Cycles, 80%SOH	> 6000Cycles, 80%SOH

Application areas:

The long-cycle/high-capacity series sodium-ion battery cells are valued for their excellent energy density, ultra-long cycle life, outstanding low-temperature and safety performance, combined with convenient modular design, which significantly enhances cost-effectiveness and economic benefits, making them highly suitable for widespread applications in energy storage field.

Application scenarios:

Energy storage, special vehicles, start-stop power supplies, and other applications that require moderate energy density but are relatively sensitive to safety and cost.



Sodium-ion battery and Photovoltaic-storage-charging



Special vehicles



Start-stop power supply