



# **LiFePO4 Battery Specification**

**Model:** ZY-NB12.8V50Ah-CB-C50A



(Prepare)	(Check)	(Approval)
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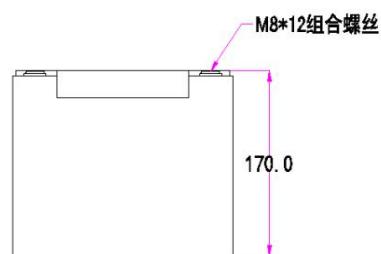
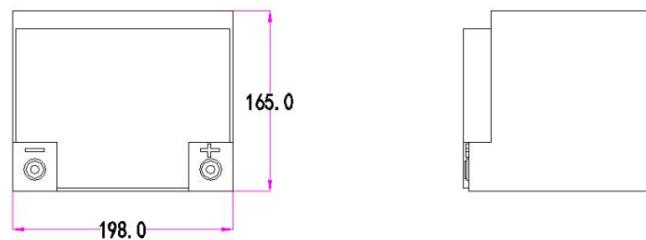
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## 1. Normal performance

NO.	Item	General Parameter	
1	Rated capacity	50Ah	
2	Standard voltage	12.8V (4S)	
3	Standard Charge voltage	14.6V	
4	Charging method	CC-CV	
5	Charge current	Normal	25A
		Max	50A
6	Cut-off voltage	10V	
7	Continuous discharge current	50A	
8	Peak discharge current	100A (5S)	
9	Total weight	About 6.5 kg	
10	Impedance (Max, at 1000Hz.)	$\leq 30 \text{ m}\Omega$	
11	Temperature	charge	0~60°C
		discharge	-20~60°C
12	Storage environment	temperature	10~45°C
		humidity	$\leq 75\%$ RH
13	Cycle life	$\geq 4000$ cycles	
14	Self-discharge rate	$\leq 3\%/\text{Month}$	
15	Battery dimension	L=197±2mm	
		W=165±2mm	
		H=170±2mm	
16	Series parallel application	Max 2 Batteries in series or 2 Batteries in parallel	

## 2. Battery appearance



### 3. Performance & Test Condition

No.	Project	Standard	Testing method
1	Rated capacity	50Ah	After standard charge, discharge @0.5C current to the end of discharge voltage. cycles for three times, One cycle capacity arrive standard, that's to say it is qualified.(The below as the same);
2	Charging keep ability in normal temperature	Remain capacity≥standard capacity *97%	After standard charging, store at 25°C±5°C for 1 month, and then discharge capacity @0.2C current to the end of discharge voltage, Then measure the capacity of cell.
3	Cycle life	Capacity≥ Standard capacity *50%	>6000 cycles when 0.1C discharge rate and 50% DOD
4	Internal Impedance	≤30mΩ	@50% SOC @1kHz AC internal resistance test instrument.
5	Discharge temperature characteristic @0.2C	-20°C(6h) $\geq$ 70% 0°C(6h) $\geq$ 90% 25°C(4h) $\geq$ 100% 55°C(4h) $\geq$ 97%	Capacity @specified temperature/Capacity @ 25°C

### 4. Storage and Transportation

- 1.Based on the character of cell, proper environment for transportation of LiFePO4 battery pack need to be created to protect the battery.
- 2.During transportation,30%-50% SOC must be kept; Avoid short circuit, prevent the liquid from entering the battery pack or immersing in the liquid (such as water, oil, etc.)
- 3.Battery should be kept at 0°C~45°C in warehouse where it's dry, clean and well-ventilated.
- 2.During loading of battery, attention must be paid against dropping, turning over and serious stacking.



## 5. Warnings and Tips

In order to prevent the battery leaking, getting hot and exploding, please pay attention to preventing measure as following:

### Warning!

- Never throw the battery into water, keep it under dry, shady and cool circumstance when not use.
- Never upside down the positive and negative.
- Never connect the positive and negative of battery with metal.
- Never ship or store the battery together with metal
- Never knock, throw or trample the battery.
- Never cut through the battery with nail or other edge tool.

### Notice!

- Never use or keep the battery under the high temperature. Otherwise it will cause battery heat, get into fire or lose some function and reduce the life. The proposed temperature for long-term storage is 0-45°C.
- Never throw the battery into fire or heating machine to avoid fire, explosion and environment pollution; scrap battery should be returned to the supplier and handled by the recycle station.
- Never use the battery under strong static and strong magnetic field, otherwise it will destroy the protecting device.
- If battery leaked, the electrolyte get into eyes, please don't knead, please wash eyes by water and send to hospital. Otherwise it will hurt eyes.
- If battery emit peculiar smell, heating, distortion or appear any unconventionality during using, storage or charging process, please take it out from device or charge and stop using.
- Never cut the battery in socket directly; please use the stated charger when charging..
- Check the voltage of battery and relevant connectors before using the battery. It can't be used until everything turns out to be normal.
- Prior to charging, fully check the insulation, physical condition and ageing status, since breakage and ageing are never allowed; the pack voltage must not be less than 10V, if not, it's abnormal and that battery needs to be labeled. The user should contact our Customer Service Dept and It can't be charged until repaired by our staff.
- The battery should be stored in half SOC. It needs to be charged once if out of use for as long as half a year.
- Clean the dirty electrode, if any, with a clean dry cloth, or poor contact or operation failure may occur.
- If the battery pack is used in series or in parallel, it must be ensured that the battery pack has the same charge and the pressure difference is within 50mV.