



## Specification Sheet

**51.2V 100Ah**

**Lithium Iron Phosphate (LiFePO<sub>4</sub>)**

**Battery**

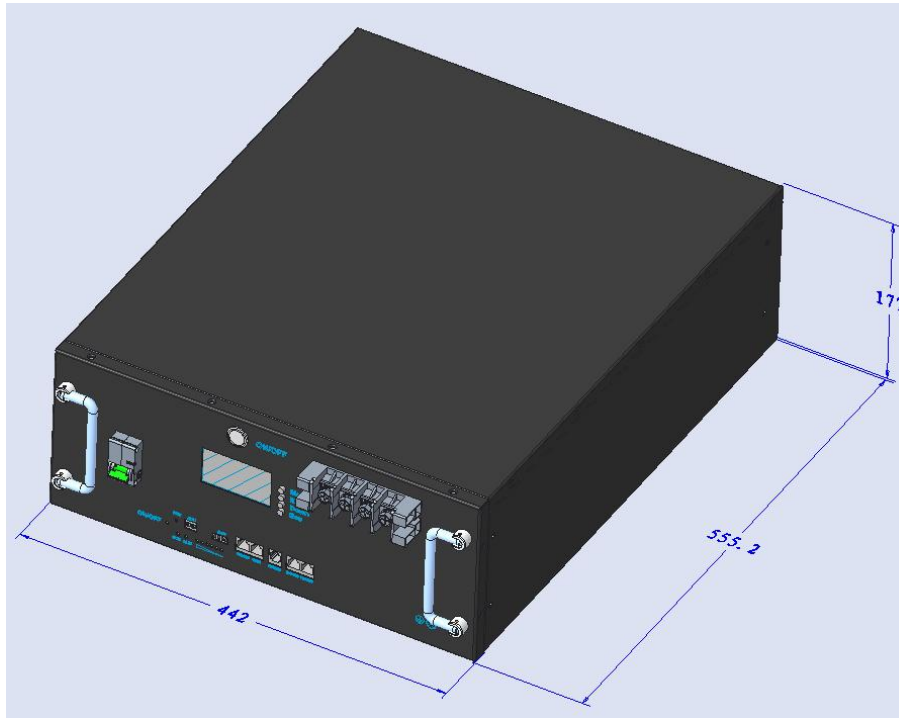


**Model Rack48100**

## General Parameter

Battery Parameter		
Item	Parameter	
Rated power	51.2V (16S) 100Ah	
Energy	5120Wh	
Standard charge voltage	58.4V	
Charge method	CC-CV	
Recommended charge current	20A	
Max charge current	100A	
Cut-off voltage	40V	
Continuous discharge current	100A	
Total weight	50kg	
Impedance (Max, at 1000Hz.)	≤50mΩ	
Operation temperature range	Charge	0~60℃
	Discharge	-20~60℃
Storage environment	Temperature	10~45℃
	Humidity	≤75%RH
Cycle life	1C@DOD100%	≥2500 cycles
	0.2C@DOD100%	≥4000 cycles
Self-discharge rate	≤3%/Month	
Battery dimension	L=555±5mm	
	W=442±5mm	
	H=177±5mm	

## Battery Appearance & Dimension



## Performance & Test Condition

Project	Standard	Testing Method
Rated capacity	100Ah	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).
Capacity retention rate	Remain capacity $\geq$ standard capacity *97%	After standard charging, store at $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 1 month, and then discharge capacity @0.2C current to the end of discharge voltage, then measure the capacity of cell.

Cycle life	Capacity $\geq$ Standard capacity *80%	After standard charge, discharge @0.2C current to the end of discharge voltage. Rest for 1h, cycles for 4000 times.	
Internal Impedance	$\leq 50\text{m}\Omega$	@50% SOC @1kHz AC internal resistance test instrument.	
Discharge temperature characteristic @0.2C	-20°C (6h)	$\geq 70\%$	Capacity @specified temperature/Capacity @25°C.
	0°C (6h)	$\geq 90\%$	
	25°C (4h)	$\geq 100\%$	
	55°C (4h)	$\geq 97\%$	

## Storage & Transportation

- Based on the character of cell, proper environment for transportation of LiFePO<sub>4</sub> battery pack need to be created to protect the battery.
- 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).
- Battery should be kept at 0°C~45°C in warehouse where it's dry, clean and well-ventilated.
- During loading of battery, attention must be paid against dropping, turning over and serious stacking.

## Warnings & 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 20V, 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.

\*Any other items which are not covered in this specification shall be agreed by both parties.



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