LiFePO4 Battery 12V100Ah

沃特玛®
OptimumNano

Cylindrical Lithium Iron Phosphate Battery

OPT12100

Diameter: 32.2±0.5mm

Height: 70.0±0.5mm

Brief Introduction

OptimumNano always develop and produce **32650** cells to or assemble battery packs to satisfy the requirements of high performance and operational reliability of our customers. We also have the **14500/18650/22650/26650** cells to meet all your requirements.

Key Features

- Attractive cycle life
- Extended safety performance
- Wide operating temperature range
- Unrivalled high temperature performance
- Green energy without metal contaminant
- High capacity
- Steady output voltage
- Little self-discharge
- Double safety protection
- Withstanding very high level of vibrations and shocks

Safety Characteristics

- Over-charge/Over-discharge Ability to withstand over-charge/withstand over-discharge, and there is no fire, no exploding and work well
- Short circuit Ability to withstand short circuit, and there is no fire, no exploding
- Acupuncture Ability to withstand nail puncturing, and there is no fire, no exploding
- Thermal shock Ability to withstand thermal shock, and there is no fire, no exploding

Electrical Charateristics

Nominal Voltage	12V
Nominal Capacity (at 0.5C, 25 degC)	100Ah
DC Internal Resistance	≤50mΩ
Expected Cycle Life	More than 2000 cycles, with 1C charge and discharge rate, at 25 ℃

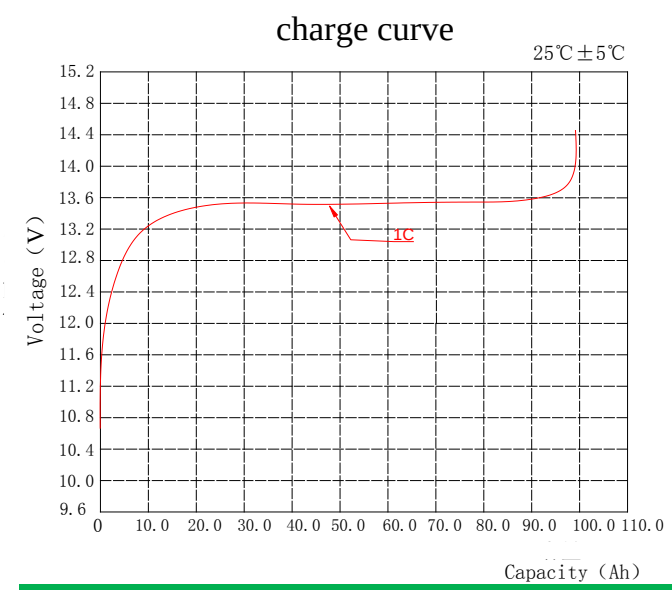
Mechanical Characteristics

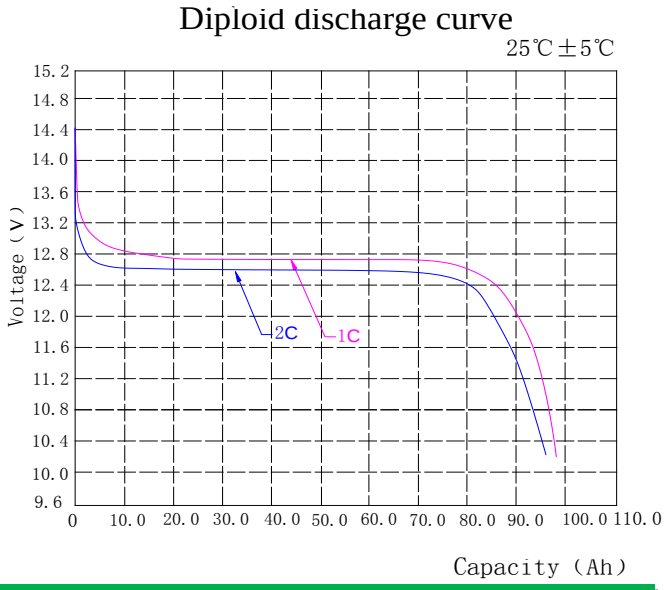
Height	214±2mm
Width	172±2mm
Length	329±2mm
Net Weight	~14Kg

Operation Conditions

Charge Method	CC-CV
Max. Charge Voltage	14.6V
Continuous Charge Current	Max. 100A
Charge Temperature	0℃～45℃
Continuous Discharge Current	Max. 100A
Peak Instant Discharge Current(10 Seconds)	200A,
Discharge Cut-off Voltage	10.0V
Discharge Temperature	-20℃～65℃
Storage Temperature	-20℃～45℃
Self Discharge (Stored at 50% SOC)	<= 3%/month

Charge and discharge curve





Function of PCM/BMS (Battery Management System)

Circuit Protection: OptimumNano's cylindrical cells are optimized through the use of its battery PCM/BMS, through monitoring cells, to provide protection against overcharge, over discharge, short circuit. Also it enables every battery pack to obtain independent balancing function. Overall, the BMS helps to ensure safe and accurate Operation.

Item	Content	Criterion
Over charge Protection	Over charge detection voltage	3.90±0.05V
	Over charge release voltage	3.80±0.05V
	Maximum charge voltage	3.65±0.05V
	Maximum charge current	**≤ 100A**
Over discharge protection	Over discharge detection voltage	2.0±0.1V
	Over discharge detection delay time	≤167mS
	Over discharge release voltage	2.3±0.075V
Over current protection	Over current detection current	**200A**
	Detection delay time	≤1 S
	Release condition	Cut load
	Maximum continuous current	**≤100A**
Short circuit protection	Detection condition	Exterior short circuit
	Detection delay time	230～500uS
	Release condition	Cut short circuit
Cells balancing	Balancing current	40±10mA
	Balancing voltage	3.60±0.01V

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,50% SOC must be kept to ensure that short circuit, appearance of liquid in the battery or immersion of battery in liquid never occur.

3. Battery should be kept at -20℃～45℃ in warehouse where it's dry, clean and well-ventilated.

4. During loading of battery, attention must be paid against dropping, turning over and serious stacking.

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.

Tips!

- 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 10-45℃.
- 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 insulativity, physical condition and ageing status, since breakage and ageing are never allowed; the pack voltage must not be less than the cutoff voltage, 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 50% 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

Contact Us

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