

LP100-12 (12V100Ah)

Cylindrical Lithium Iron Phosphate Battery

Diameter: 32.2 ± 0.5 mm

Height: 70.0 ± 0.5 mm



Brief Introduction

Koyosonic 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 overcharge/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

LiFePO4 Battery

Electrical Characteristics

Nominal Voltage	12V
Nominal Capacity (at 0.5C, 25 degC)	100Ah
DC Internal Resistance	≤ 50 m Ω
Expected Cycle Life	More than 2000 cycles, with 1C charge and discharge rate, at 25 $^{\circ}$ C

Mechanical Characteristics

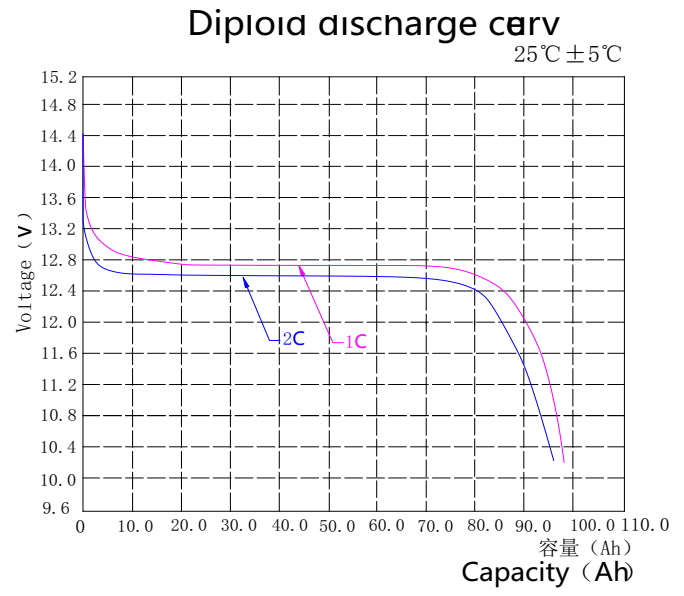
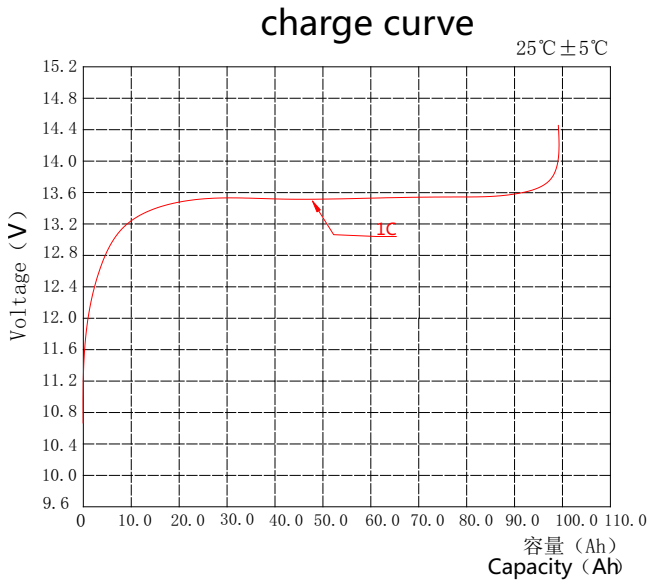
Height	214 ± 2 mm
Width	172 ± 2 mm
Length	329 ± 2 mm
Net Weight	~ 14 Kg

Operation Conditions

Charge Method	CC-CV
Max. Charge Voltage	14.6V
Continuous Charge Current	Max. 100A
Charge Temperature	0 $^{\circ}$ C \sim 45 $^{\circ}$ C
Continuous Discharge Current	Max. 100A
Peak Instant Discharge Current(10 Seconds)	200A,
Discharge Cut-off Voltage	10.0V
Discharge Temperature	-20 $^{\circ}$ C \sim 65 $^{\circ}$ C
Storage Temperature	-20 $^{\circ}$ C \sim 45 $^{\circ}$ C
Self Discharge (Stored at 50% SOC)	$\leq 3\%$ /month

LiFePO4 Battery

Charge and discharge curve



Function of PCM/BMS (Battery Management System)

Circuit Protection: Koyosonic 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

LiFePO4 Battery

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°C ~ 45°C 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.
- | 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.

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 15°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.
- | 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 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