

Lithium ion LFP Range



SEC Lithium ion LFP range offers a wide range of LiFePO₄ battery with high energy density, high reliability for Stand-by Power, Golf Trolley, and Electric bike. The LFP range batteries are manufactured with the latest technology to ensure much better performance compared to traditional industrial batteries. With the aid of the Battery Management System (BMS), charge and discharge can be easily monitored to maximize the battery's capacity. Modulized cell architecture protects the battery bank from single-cell failures affecting overall performance.

Features

- * Safety performance
- * Long cycle-life
- * Environmentally friendly
- * Light weight, small volume
- * No-memory effect
- * High temperature resistance

Applications

- * Flashlights
- * Cap lamps
- * Electric tools
- * Various portable equipment
- * Medical instruments
- * UPS
- * Wind and type storage
- * Electric motor car battery pack

Introduction

Lithium ion battery is a rechargeable battery different from other industrial batteries. Its chemistry uses an intercalation mechanism instead of redox galvanic action. The SEC LFP range batteries are mainly composed of 18650 and 26650 single cell. LiFePO_4 is a non-toxic chemical compound used as the cathode material. This type of battery has several advantages:

Safety performance

Compared to other Li-ion cathode materials, LiFePO_4 is safe as its stable structure can be kept well under continuous charging and discharging. LiFePO_4 battery's overcharge tolerance is the highest among all the other Lithium ion batteries.

Long cycle-life

At room temperature, the SEC LFP batteries can achieve 2000 cycles at 1C charge-discharge. The capacity retention rate is more than 80%, 8 times of Lead-acid battery, 3 times of Ni-MH battery, 4 times of LiCoO_2 , 4-5 times of LiMn_2O_4 . Currently SEC 18650 single cell can cycle up to 3000 times.

Environmentally friendly

LiFePO_4 batteries are heavy-metal free. And LiFePO_4 is a non-toxic and non-polluting compound. Our product has passed the certification of RoHS.

Light weight, small volume, high energy density

Lithium ion battery's weight is 1/3 of lead-acid battery, volume is 2/3 of lead acid battery, energy density is 3 times higher than lead-acid battery.

No memory effect

Memory effect is a cyclic memory problem where the NiCd battery would remember the amount of discharge for previous discharges and gradually lose their maximum energy capacity. LiFePO_4 does not have memory. The battery can be partially discharged and does not need periodic full discharge cycles to prolong life.

High temperature resistance

Lithium ion battery can be discharged at -40°C to $+80^\circ\text{C}$. LiFePO_4 electric heat peak can reach 350°C – 500°C while LiCoO_2 and LiMn_2O_4 can reach only about 200°C .

Lithium Battery Module 3.2V

Stand-by Use 1-LFP Range	Rated Capacity C ₆	Dimensions (mm)		
		Length	Width	Height
	40Ah - 60Ah	180	77	105
	150Ah - 215Ah	186	81	281
	110Ah - 170Ah	92	82	410
	100Ah - 115Ah	124	74	254
	240AH - 270Ah	206	103	370

Golf Trolley Battery

Golf Trolley Use 2-LFP Range	12V16Ah	12V22Ah
Assembly	4S5P	4S7P
Rated Capacity C ₂₀	16Ah	22Ah
Dimensions	168 x 138 x 75mm	168 x 138 x 100mm
Weight	2.0kg	2.7kg
Cycle life	1800-2000 time	
Charge terminal	RCA	
Discharge terminal	T-plug output for alternative usage Screw output for alternative usage	
Recharge time	5 Hours	
Warranty	2 years	



Electric Bike Battery

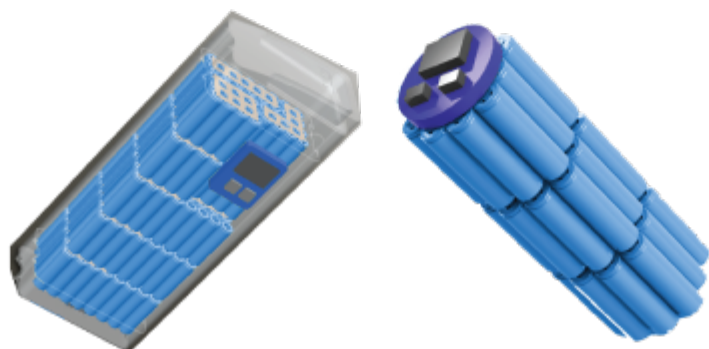
Electric Bike 3-LFP Range	Model	Assembly	Voltage	Rated Capacity C _s	Dimensions (mm)	Weight
 3-LFPA	24V10AH	8S7P 18650	24V	10Ah	149 x 56 x 300	4.0kg
	36V10AH	12S7P 18650	36V	10Ah	149 x 56 x 380	5.5kg
	48V10AH	16S7P 18650	48V	10Ah	149 x 56 x 480	6.5kg
 3-LFPB	24V10AH	8S7P 18650	24V	10Ah	110 x 75 x 380	3.2kg
	36V9.3AH	12S3P 26650	36V	9.3Ah	110 x 75 x 440	3.8kg
 3-LFPC	24V9.3AH	8S2P 26650	24V	9.3Ah	170 x 130 x 70	3.5kg
	36V6.2AH	12S6P 26650	36V	6.2Ah	170 x 130 x 70	3.5kg
 3-LFPD	24V9.3AH	8S3P 26650	24V	9.3Ah	92 x 420	3.5kg
	24V6.2AH	8S2P 26650	24V	6.2Ah	92 x 330	3.5kg

Electric Bike Battery

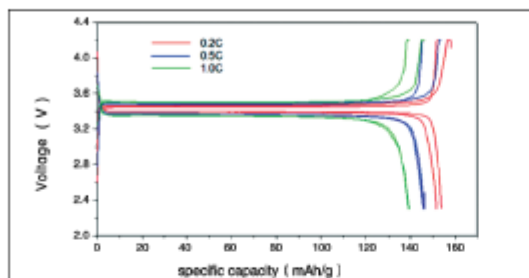
Electric Bike 3-LFP Range			
Model	3-LFPE	3-LFPF	3-LFPG
Assembly	12S7P 18650	12S3P 26650	8S3P 18650
Nominal voltage	36V	36V	24V
Rate capacity C ₅	10Ah	9.6Ah	10Ah
Discharge current	≤20A	≤20A	≤20A
Charge voltage	43.8VDC	43.8VDC	29.2VDC
Dimensions (mm)	455 x 150 x 70	146 X 66 X 340	455 x 150 x 70
Weight	4.5kg	4.3KG	4.5kg

Electric Bike Battery Charger

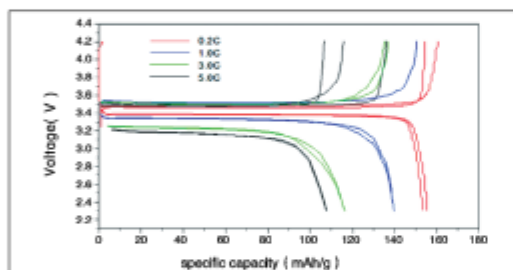
		
Model	4-LFPA	4-LFPB
Output power	29.2V/5A 43.8V/4A 58.4V/3A	29.2V/3A 43.8V/2.5A 58.4V/2A
Dimensions (mm)	150 x 90 x 50	135 x 90 x 50
Weight	0.9kg	0.8kg



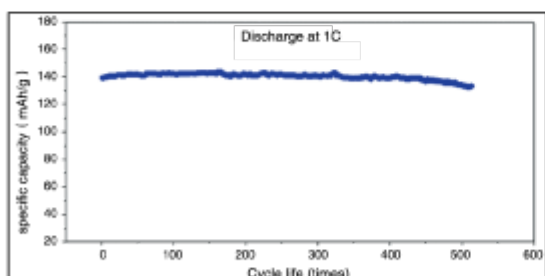
Discharge performance of capacity type



Discharge performance of rate type



LiFePO₄ button cell 1C cycle



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