

# 产品规格承认书

## Specifications

25.6V 50AH

磷酸铁锂储能箱

LiFePO4 Battery Pack

### 承认签章 Approval Signature

核准 Approved	审核 Checked	拟定 Registered

### 客户确认栏 Customer Approval

确认意见 Conformation:

签章 Signature:

日期 Date:

<b>VIPOW</b>	<b>广州市捷力电子科技有限公司</b>	
	Guangzhou Jieli (VIPOW) Electronic Technology Co., Ltd	
	25.6V 50AH 储能箱 规格书 LiFePO4 Battery Specifications	Rev 1.0

## 文件发行/修订履历

### Product Modified Record List

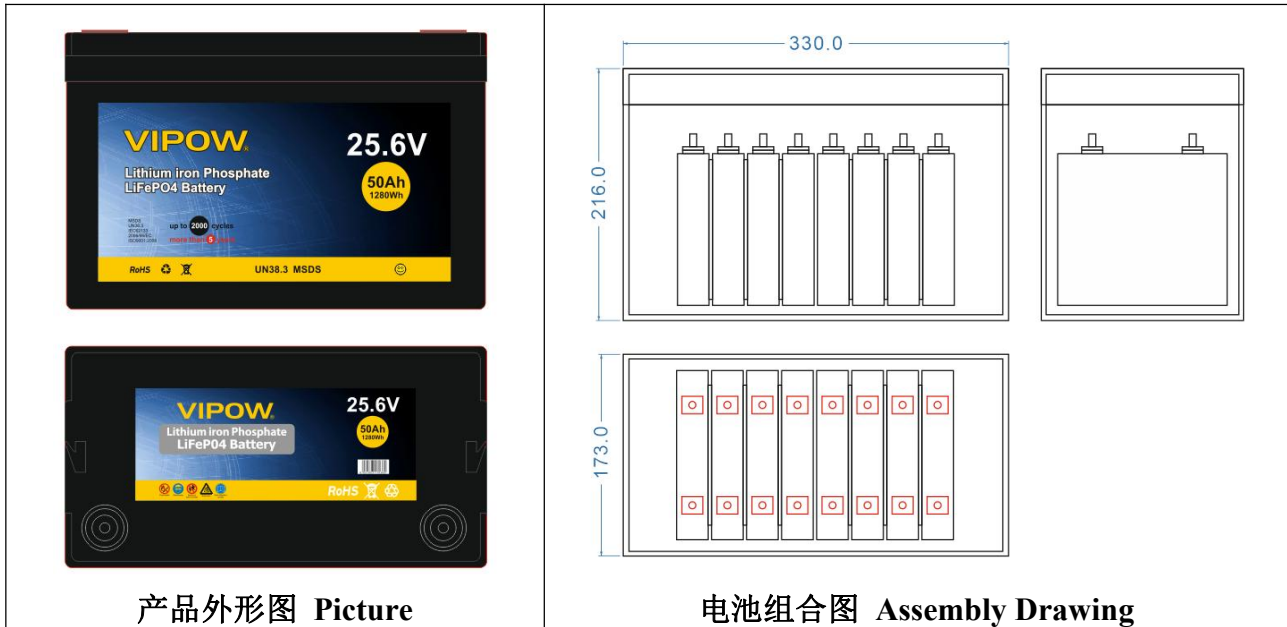
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V1.0	2018.09.19	/	首次发行	余宣飞

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### 1. 产品参数: Product Specifications:

产品名称 Product Name:	磷酸铁锂储能箱 LiFePO4 Battery Pack	
电池容量 Capacity:	1280WH /25.6V 50AH	
产品外形尺寸 Size:	330x173x216 MM	
重量 Weight:	6.5KG (净重 N.W.), 7.0KG (毛重 G.W.)	
内置电池类型 Battery Type:	磷酸铁锂电池 LiFePO4 Battery	
充电输入 Input:	DC 15V 25A (MAX)	
放电输出 Output:	DC 25.6V 40A (MAX)	
循环寿命 Cycle Life:	≥3000 次 cycles	
充电温度 Charger Temperature:	0~45℃	
放电温度 Discharge Temperature:	0~70℃	
存储温度 Storage Temperature:	1年 year	0~30℃
	3月 months	0~35℃
	1月 month	0~45℃

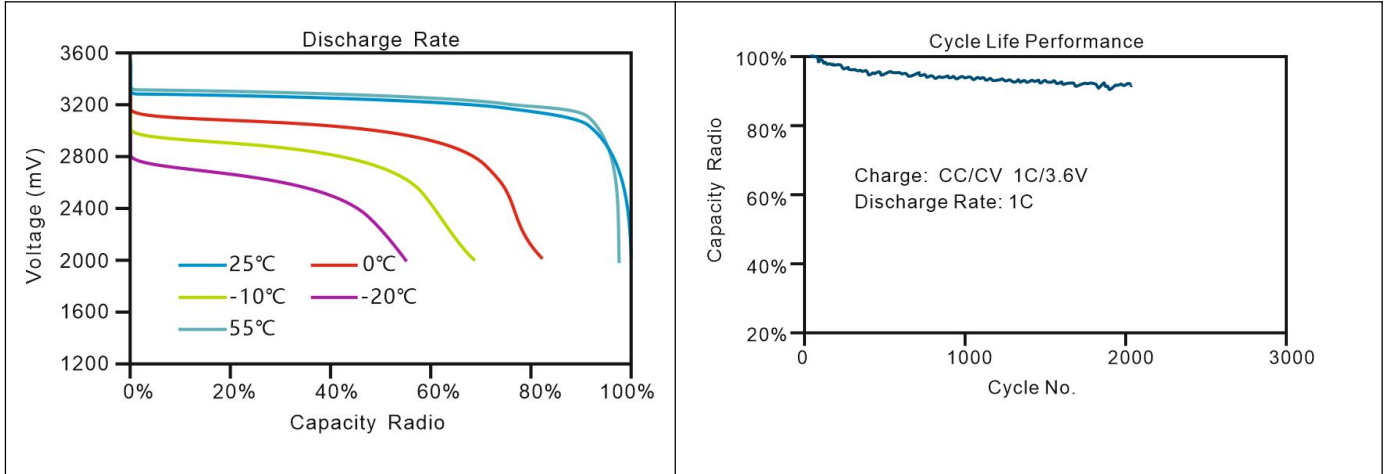
### 2. 产品外表图和电池组合图 Picture and Assembly Drawing:



### 3. 储能箱用单体电芯类型和型号 Battery Unit Type and Model:

- (1) 产品/ Product:磷酸铁锂电池/ LiFePO4 battery
- (2) 电池型号/ Model (Type): 3.2V 50AH

#### 4. 电芯特性图/Cell Characteristics diagram



#### 5. 本储能箱用电芯标准/ Cell Specification

项目/ Item	标准/ Specification	备注/ Remark	
5.1 典型容量/ Typical capacity	50 Ah	0.2C rate discharge capacity	
5.2 最小容量/ Minimum capacity	48.5 Ah		
5.3 交流内阻/ Internal impedance	≤ 2.0mΩ	By 1kHz AC	
5.4 标称电压/ Nominal voltage	3.2V		
5.5 电芯重量/ Cell weight	1.1 kg ± 0.3g		
5.8 标准放电方法 Standard discharge conditions (1C)	恒流/ Constant current	10 A	0.2C
	截止电压 End-of-charge voltage	2.0V	
5.6 标准充电方式 Standard charge method	恒流/ Constant current	10 A	0.2C
	充电电压 Charge voltage	3.65V	
	截止电流 Cut-off current	1 A	0.02C
5.7 快速充电方式 Fast charge method	恒流/ Constant current	25 A	0.5C
	充电电压 Charge voltage	3.65V	

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	截止电流 Cut-off current	1 A	0.02C
5.9 最大持续放电电流 Max continuous discharge current		40 A	0.8C
5.10 脉冲放电电流 Pulse discharge at 2 Sec		100 A	2C
5.11 循环寿命 Cycle life		3000times	0.2C continual discharge (80% DOD)
5.12 操作温度 Operating temperature	充电温度 Charging ambient temperature	0~45°C	
	放电温度 Discharging ambient temperature	0~70°C	
	存储温度 Storage temperature	1 year	0~30°C
		3 months	0~35°C
		1 month	0~45°C
5.13 外观/ Appearance	无破裂、划痕、变形、污迹、电解液泄露等		

## 6. 电池管理系统 BMS 性能特点 BMS Main Feature:

7.1. 本储能箱使用的电池管理系统具有过充电保护功能，过放电保护功能，过电流保护功能，短路保护功能，充电电量平衡管理功能。 This storage battery is design with the below function: Over charge protection, over discharge protection, over current protection, short circuit protection, battery balance management.

7.2. 产品特点 Main feature :

- 采用 A 级保护集成电路方案。Grade A protection IC.
- IC 自带电量平衡功能，平衡电路简单可靠，平衡电流可通过外部调节。 With the balance function of the IC, the balance circuit is simple and reliable, and the balance current can be adjusted externally
- 具有典型的电压侦测方式的过充电保护，过放电保护。硬件的过流，短路保护，短路保护性能稳定可靠，长时间负载短路不会对保护板和电芯产生影响。With typical voltage detection mode, this BMS is with Over charge protection over discharge protection. Short circuit protection performance reliable, long-term short circuit will not affect the protection board and battery.

## 7. 电气参数 BMS Specifications:

	详细内容 Item	规格 Spec	单位 Unit	备注 Remark
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放电 Discharge	持续放电电流 Continuous Discharge Current	40	A	
	瞬间放电电流 Max Discharge current at 2sec	100	A	
充电 Charge	充电电压 Charge Voltage	29.2	V	
	充电电流 Charge Current	25 (MAX)	A	
过充电保护 Overcharge Protection	过充电检测电压 Over charge protection voltage	$3.65 \pm 0.05$	V	
	过充电保护延时 Over charge protection delay	0.5	S	
	过充电解除电压 Over charge release voltage	$3.6 \pm 0.05$	V	
电量平衡 Battery balance	电量平衡检测电压 Balance detection voltage	3.6	V	
	电量平衡解除电压 Balance release voltage	3.6	V	
	电量平衡电流 Battery balance current	$35 \pm 5$	mA	
过放电保护 Over discharge protection	过放电检测电压 Over charge detection voltage	$2.0 \pm 0.1$	V	
	过放电检测延时 Over discharge detection delay time	0.5	S	
	过放电解除电压 Over discharge release voltage	$2.5 \pm 0.1$	V	
过电流保护 Over current protection	过电流检测电压 Over current detection current	200	mV	
	过电流检测延时 Over current detection delay time	9	MS	
	过电流保护电流 Over current protection current	$100 \pm 10$	A	可按要求设定 According to requirement
	过电流保护解除条件 Over current lease	断开负载 Disconnect the load		

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<b>短路保护</b> Short circuit protection	短路保护条件 Short circuit protection condition	外部负载短路 External short circuit		
	短路检测延时 Short circuit detect delay	250	uS	
	短路保护解除条件 Short circuit lease condition	断开负载 Disconnect the load		
<b>温度保护</b> Temperature protection	温度保护 Over temperature protection	75	℃	
<b>内阻</b> Internal resistance	主回路导通内阻	$\leq 10$	mΩ	
<b>自耗电</b> Self-consuming	工作电流 Operating Current	$\leq 100$	uA	
	睡眠电流（电池过放时） Sleeping current (over discharge)	$\leq 20$	uA	
<b>工作温度</b> Operation Temperature	温度范围 Temperature Range	0-70	℃	

## 8. 注意事项 Note:

- 9.1 根据产品标示的正确的极性接线，不可接反电池的正负极。According to the correct polarity to connect the positive and negative poles.
- 9.2 使用过程中一定要遵循设计参数及使用条件；Follow the correct parameters and conditions.
- 9.3 充、放电流不可超过规格书中的额定值；Charge current and discharge current must not exceed the rated value
- 9.4 请在规定的工作温度内使用，并且确保周围有良好的散热环境； Operating within the specified temperature range to ensure the surrounding heat dissipation is good.
- 9.5 不可自行拆卸本产品；This product cannot be disassembled by consumer.
- 9.6 避免浸水。Do not put this battery in water.