



**PRODUCT
SPECIFICATIN**

DOC NO: PLFP-018
REV: A/00
ECN: 00

产品规格书

PRODUCT SPECIFICATION

型号: PLFP1250-4S1P-12.8V50Ah

产品设计	产品设计审批	销售审批	项目工程审批	品质审批	产品经理审批

客户确认	客户签名	
	日期	
	客户盖章	

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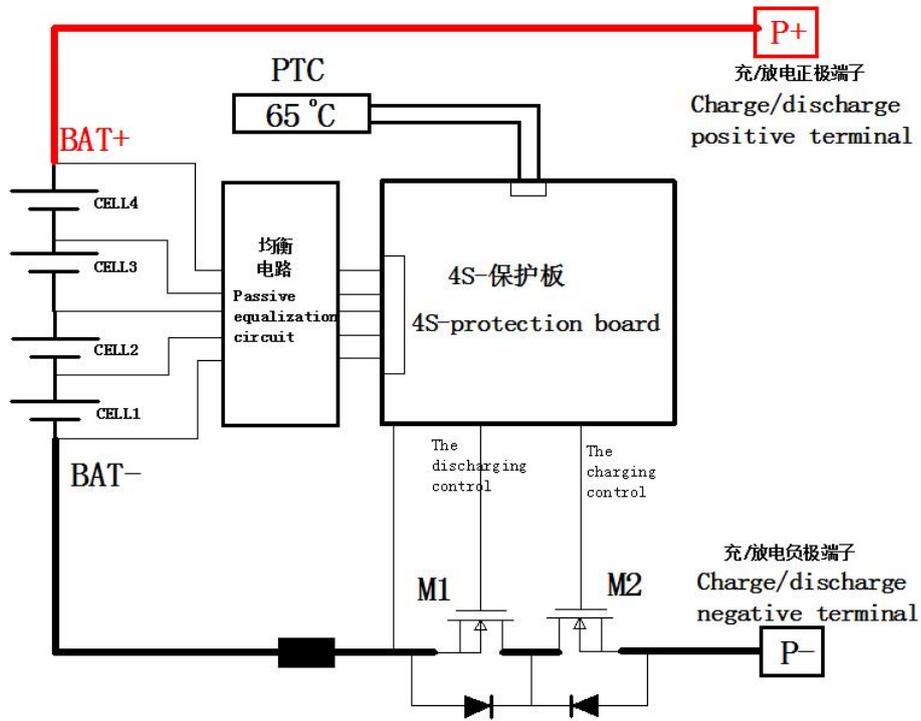
1. 应用范围 Scope

本规格书适合于力朗电池科技有限公司设计开发的可充电电池组产品 The specification describes the requirements for the Lithium-Ion rechargeable battery supplied by Dongguan Power Long battery technology Co., Ltd..

2. 基本特性 Normal performance

序号 NO.	项目 Item	常用参数 General Parameter	备注 Remark
1	型号 (Model)	PLFP1250-12.8V50Ah	
2	典型容量 (0.2C _{5A}) Standard capacity (0.2C _{5A})	50Ah	
3	最小容量 (0.2C _{5A}) Minimum Capacity (0.2C _{5A})	49Ah	
4	额定电压 Rated voltage	12.8V	
5	最大充电电压 Max Charge voltage	14.6V	
6	放电截至电压 Cut-off voltage	8.4V	
7	标准充放电 Standard charge and discharge current	20A	
	最大充电电流 Maximum Continuous Charge Current	50A	not allowed less than 10°C, 10-20°C ok, 20-45°C, SOC less than 50%, not allowed if higher than 45°C
8	最大持续放电电流 Max Continuous discharge current	50A	
9	电池重量 (Approx.) Weight(Approx including case)	~6.2Kg	
10	内阻 (Max, at 1000Hz.) Impedance (Max, at 1000Hz.)	≤50mΩ	
11	充电方法 (CC/CV) Charge method (CC/CV)	标准 Standard	CC 10A 14.6V 截止 14.6 cut off
		CV 14.6V	1A 截止 1A cut off
12	工作温度 Operate temperature	充电 Charge	0°C~45°C
		放电 discharge	-20°C~60°C
		贮存 storage	-20°C~45°C
13	最多串联数	≤4 组	

3、产品方框图 Battery pack block diagram



4、端子定义 Terminal specification

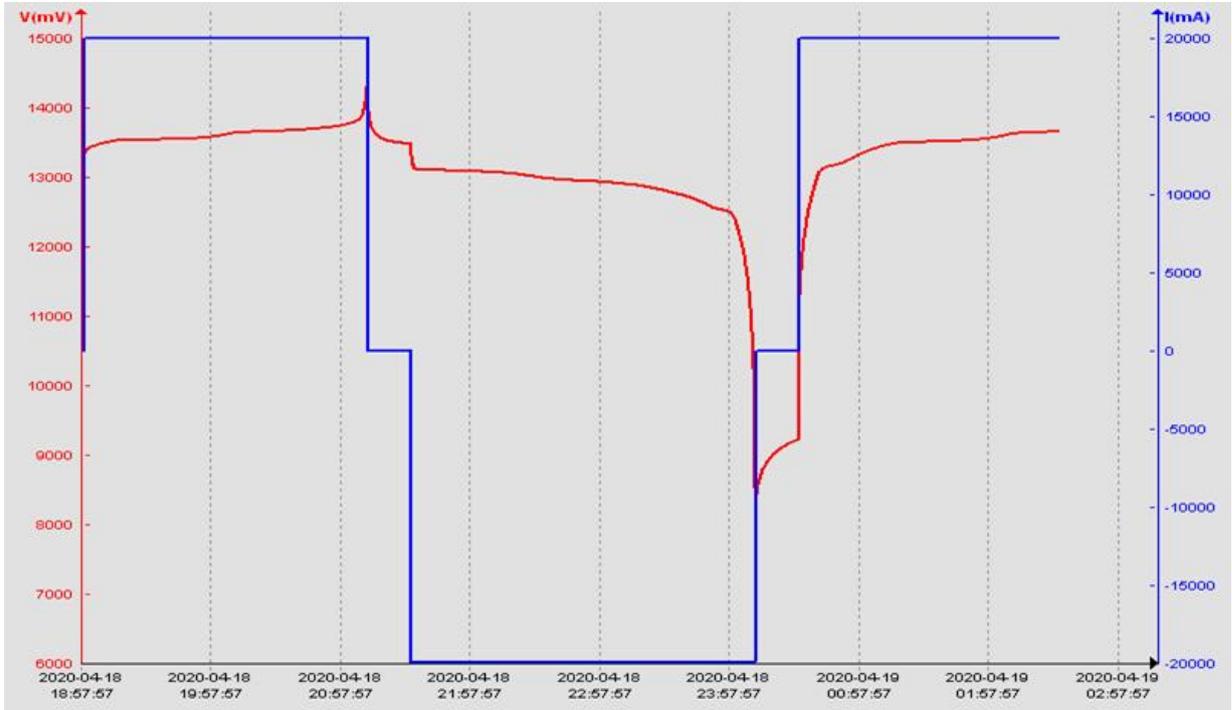
PACK-	充放电负端 Charge and Discharge negative electrode	M6 铜柱
PACK+	充放电正端 Charge and Discharge cathode	M6 铜柱

5、最大适用范围 Absolute maximum rating

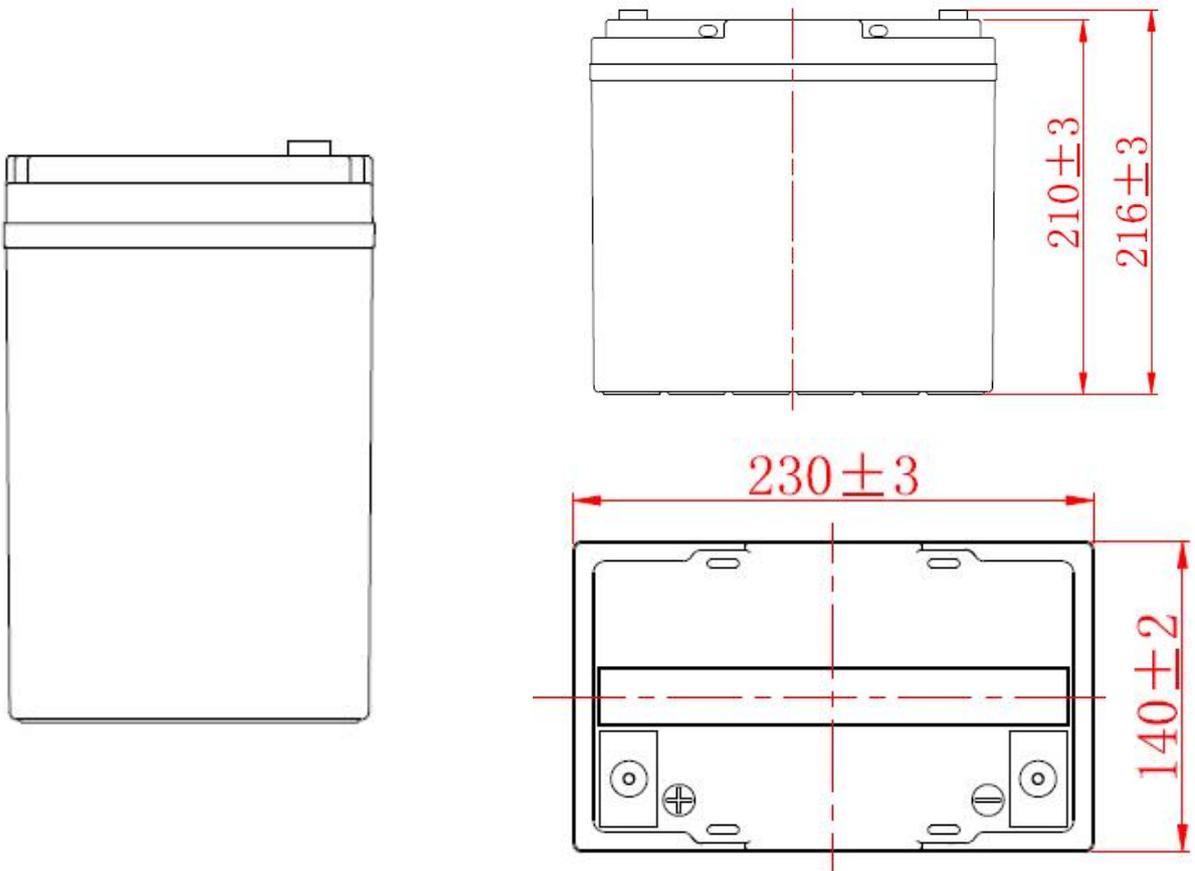
项目 Parameter	参数值 Rating	单位 Unit
工作温度范围 Operating temperature range	-20 ~ 60	°C
工作湿度范围 Operating humidity range	5 ~ 85%	%RH
贮存温度范围 Storage temperature range	-20 ~ 60	°C
贮存湿度范围 Operating humidity range	< 75%	%RH
最高承受电压 Supplying voltage range	80	V

6、电池组充放电曲线 Battery charging/discharging profile

使用标准充放电电流测试电池组的容量 Applying standard charging/discharging current and testing the battery capacity



7、外形图 Outline Drawing



8、实物图 Matter Picture

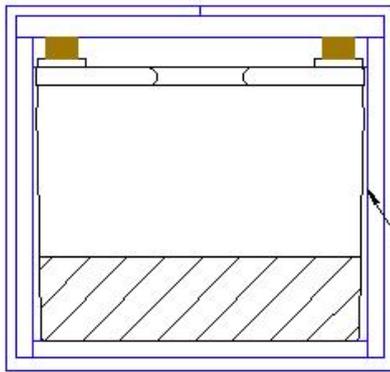


9、商标及贴纸 Labels

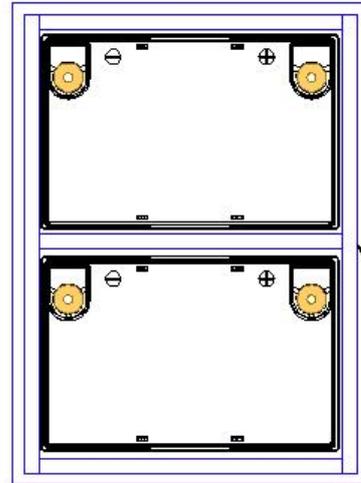


尺寸:218mm*163mm

10、包装图 Package



— 四周围珍珠棉



— 四周围珍珠棉

每箱装两个电池

11、使用说明 Instructions and Requirement

11.1、使用电池前，请仔细阅读使用说明书和电池表面标识。

Please read the battery instructions and the labels before use.

11.2、在使用过程中，应远离热源、高压，避免儿童玩弄电池，切勿摔打电池。

Please prevent the battery from heat, high voltage and children. Do not drop the battery.

11.3、切勿将电池正负极短路，切勿自己拆装电池，也勿让电池放在受潮处，以免发生危险。

Do not short circuit cathode and anode directly. Do not disassemble the batter. Do not put the battery in the damp place.

11.4、废弃电池请安全妥当处理，不要投入火中或水中。

Please deal the obsolete battery properly. Do not put into fire or water.

11.5、电池组应在室温存放，应充电到 40%-60% 的电量，为防止电池过放，建议每 3 个月进行一次充电。

The battery should be stored at room temperature, with SOC 40%-60%. It is suggested to charge it every 3 months to prevent from over-discharge, i

11.6、电池组应在规定条件下使用，对超过存储一年的电池，性能不作保证。

Battery should be used under specified condition. For the battery stored over one year, performance is not guaranteed.

11.7、电池在运输过程中需满足相应的规定，如包装，文件，标贴等要求。

Battery should meet corresponding requirements during transportation, such as package, documents, and label.

11.8、电池组串联使用：a. 不能混批次串接使用，只能同一批次串联使用 b. 电池模组串联时模组总电压之间压差 $\leq 100\text{mV}$ c. 串联的模组使用的连接导体尽量要粗且导电性良好，串联处的接触面要大，不能出现接触松动等现象，尽量减低模组之间的串联内阻 d. 最多串联 4 组电池模组。

Series connection of batteries: A. Only batteries of same model from same batch can be used in series. B. the total voltage difference between batteries should be $\leq 100\text{mV}$. C. The connection conductor should be of good electronical conductivity and thick to enlarge contact area. Please ensure good connecction to minimize the internal resistance between batteries. D. Maximum 4 batteries can be connected in series.

11.9、电池组不建议并联使用

Parallel use is not recommended

12、保护板 PCM parameters

12.1、电气参数 Electronic characteristic

序号 N.O	项目 Item	规格 Spec	单位 Unit	备注 Remark
1	过充电保护电压 Overcharge detection voltage	3.75 ± 0.10	V	
2	过充电保护恢复电压 Overcharge release voltage	3.60 ± 0.10	V	
3	过放电保护电压 Over-discharge detection voltage	2.10 ± 0.10	V	
4	过放电保护恢复电压 Over-discharge release voltage	2.30 ± 0.10	V	
5	放电过流保护值 Over-current detect value	200 ± 50	A	
6	过流保护延时 Over-current protection delay time	300 ± 250	mS	
7	充电最大持续电流 Charge continue current	≤50	A	
8	放电最大持续电流 Discharge continue current	≤50	A	
9	放电温度保护 Discharging Temperature	65±5	℃	
10	放电温度保护恢复 Discharging Temperature Protection Release	48±5	℃	
11	过充电检测延迟时间 Overcharge detection delay time	700~1700	mS	
12	过放电检测延迟时间 Over-discharge detection delay time	50~350	mS	
13	均衡开启电压 Balance Start up Voltage	3.60 ± 0.10	V	
14	均衡电流 Balance current	10~60	mA	
15	内阻 Impedance	≤60	mR	
16	静态电流 Supply current (Normal mode)	≤ 100	uA	
17	短路保护功能 Short circuit protection	≤600uS		

13、免责声明 Free-responsibility declaration

产品使用前, 请用户说细阅读产品规格书、使用说明书及使用注意事项等, 了解产品的使用方法及应 用范围; 若出现产品使用方法错误、电路连接不对或采用的输入电源、负载功能参数与产品规格 书所标性 能参数不符等现象均属使用不当, 由使用不当造成产品、负载及周边连接件的损坏, 本公司均不承担任何责任。Before using the battery, you should read the specifications, usage instruction and some attentions carefully to learn its application method and areas. If the phenomenon such as error using method or wrong circuit connection, or input power data, working index are in consisted with the specifications happen and cause damage to production ,circuit and its accessories , we are not responsible for it.

本规格书中任何未提及的事项, 须经双方协商确定。Any matters that this specification does not cover should be conferred between the customer and IES.

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