	Prismatic LiFePO4 Battery	
	Model	**Specifications**
	IFpP36115200-50	**LFP 50Ah 3c Grade A**

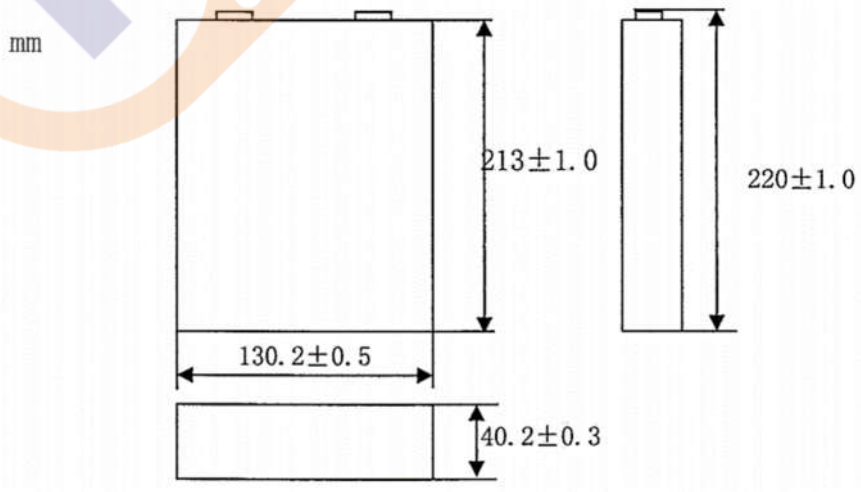
1. Scope

This document describes the product specification of the Lithium-ion Phosphate rechargeable cell mentioned above.

2. Specifications:

No.	Items	Specifications
1	Charge Voltage	3.65V
2	Nominal Voltage	3.2V
3	Rated Capacity (discharge at 0.33C to voltage of 2.5V at 23°C±5°C)	50Ah
4	Standard Charging Current	0.33C
5	Standard Charging method	Under the conditions of 25° C ± 5 ° C, 0.33C Constant current charge to 3.65V, then Constant voltage3.65V charge till charge current decline to ⩽0.05C.
6	Max. charge current	1C
7	Max. Discharge current	Under the conditions of 25° C ± 2 ° C, Discharging at 3C for 30s at 100% SOC
8	Discharge cut-off voltage	2.5V
9	Operating temperature Relative humidity %	Charging : 0°C-45°C, 65%±20%RH discharging : -20°C-60°C, 65%±20%RH
10	Recommended Storage temperature	15°C-35°C
11	Cell Weight	Approx. 1.5kg
12	Impedance	⩽0.7mΩ
13	Cell dimension	Thick : 36.5mm±0.3mm Width : 115.2mm±0.2mm Length : 189.0mm±1.0mm

3. Batter Cell Drawing (All units in mm, not in scale) :



4. Battery Cell Performance Criteria and Test Conditions:

4.1 Standard environmental test conditions

Unless otherwise specified, all tests stated in this datasheet are conducted at below conditions:
Temperature: 23°C±5°C,
Relative Humidity: 65%±20%.

4.2 Electrical characteristics:

No.	Items	Test Methods and conditions	Criteria
1	Standard Charge condition	Charging the cell with constant current at 0.33C and then with constant voltage at 3.65V till charge current declines to ≤0.05C.	Charge Voltage = 3.65V Charge Current = 16.5A
2	Rapid Charge condition	Charging the cell initially with constant current at 1C and then with constant voltage at 3.65V till charge current declines to ≤0.05C.	Charge Voltage = 3.65V Charge Current = 50A
3	Initial Impedance	Internal resistance measured at AC 1KHz within 1 hour after standard charge	≤0.7mΩ
4	Cell Voltage	Battery state upon shipment	≥3.2V
5	Rated Capacity	(1) Prior to charging, the cell shall be discharged at a constant current of 0.33C down to the cut-off discharge voltage 2.5V, rest for 10 minutes. (2) The capacity means the discharge capacity of the cell, which is measured with discharge current of 0.33C with 2.5V cut-off voltage after standard charge.	50Ah
6	High Rate Discharge Performance	(1) Prior to charging, the cell shall be discharged at a constant current of 0.33C down to cut-off discharge voltage 2.5V, rest for 10 minutes. (2) 0.33C CC to 3.65V, and CV to 0.05C cut off, rest for 10 minutes. (3) The capacity means the discharge capacity of the cell, which is measured with discharge current of 1C with 2.5V cut-off voltage.	⩾97% Rated Capacity
7	Cycle Life	Charge: Charging the cell with constant current at 0.5C and then with constant voltage at 3.65V till charge current declines to ⩽0.05C, rest for 30mins. Discharge: 1C discharge to 2.5V, one cycle is finished, then rest for 30mins. Then repeat above steps, when capacity is less than 80% of nominal capacity, the battery life is over.	⩾3500cycles

4.3. Safety Performance:

4.3.1. Battery Cell Safety Performance:

No.	Items	Test Methods & Conditions	Criteria
1	Overcharge	After standard charge, rest for 10mins; then charge at constant current of 1C to 5V.	No Fire, No Explosion
2	Overfall	After standard charge, rest for 10mins; then discharge at constant current of 0.33C to0V.	No Fire, No Explosion
3	Short Test	After standard charge, the external short circuit for 10 min, the external circuit resistance ≤ 10mΩ.	No Fire, No Explosion
4	Crush test	After standard charge, according to the following test conditions: 1) crush direction: perpendicularly to the cell plates, 2) crush degree: until the cell voltage is 0 V or Shell burst	No Fire, No Explosion
5	Fall Test	After standard charge, the cell falls freely from 1.5m to the wooden floor, twice each.	No Fire, No Explosion

4.4 Visual Inspection:

There shall be no such defect as scratch, flaw, crack and leakage which may adversely affect commercial value of the cell.

5. Storage and others:

5.1 Storage

The best storage temperature: 15℃ - 35℃.

6. Appendix (For reference only)