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C43F-228Ah Lithium Ion Battery Specification

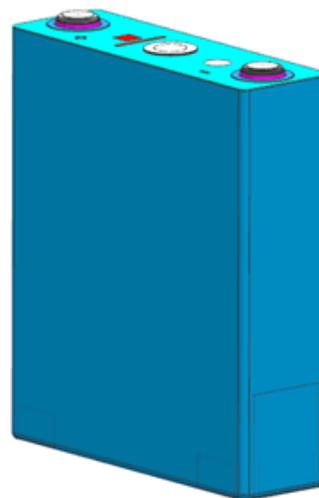
❖ Battery Type : C43F

❖ Features

- LiFePO₄ as cathode material
- Excellent safety, long life time
- Good temperature performance and large operating temperature range
- High energy density
- Environment friendly

❖ Certification

- GBT31484-2015
- GBT31485-2015
- GBT31486-2015



Nominal characteristics		Cell dimensions	
Nominal Voltage	3.20 V	Length	173.0 mm
Capacity	228 Ah	Width	207.0 mm
Energy	729.6 Wh	Thickness	54.0 mm
Charge Method	Constant Current	Weight	4.17±0.1 Kg
Charge Current	46 A @ 25°C (Standard) 228 A @ 25°C (Max. Continue Current)	Abuse test (GB31485)	Test result (based on EUCAR)
Charge Cut-off	3.80V/Cell	Nail penetration	Pass-L4a
Discharge Method	Constant Current	Overcharge	Pass-L4a
Discharge Current	46 A @ 25°C (Standard) 228 A @ 25°C (Max. Continue Current)	Over-discharge	Pass-L2
Discharge Cut-off	2.00V/Cell	External short	Pass-L2
Peak Charge Power		Oven	Pass-L4a
Peak Discharge Power			
Shipment Voltage	3.25V~3.35V		
Shipment SOC	30%~60%		



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❖ Charge at Different Rate

After fully discharged at $23\pm 2^{\circ}\text{C}$ with 0.5C discharge current, the cell is charged at different C-rate to 3.80V.

❖ Discharge at Different Rate

After fully charged at $23\pm 2^{\circ}\text{C}$ with 0.5C charge current, the cell is discharged at different C-rate to 2.00V.

❖ Discharge at Different Temperature

After fully charged at $23\pm 2^{\circ}\text{C}$ with 0.5C charge current, then keep the cell at different temperature for 8 hours. The cell is discharged to 2.00V with 0.5C.

❖ Safety Instructions

• Operating & Storage Conditions

Charge Temperature	0~+50°C
Discharge Temperature	-20~+55°C
Normal Storage	-20~+28°C (<3 months, 20~60% SOC)
Long Term Storage	-20 ~+28°C (<1 year, 30~60% SOC)
Storage Humidity	≤80%
Elevation	≤4000m

• Necessary Protection Functions

During charge and discharge cycles, the charger and the protection circuit should be satisfied the following items to insure the safety. (*BYD suggested)

No.	Items	Condition
1	Charge Cut-off Voltage	3.80 V/Cell
2	Discharge Cut-off Voltage	2.00 V/Cell
3	1st Over Charge Protective Voltage	3.81V~3.90 V/Cell
4	2nd Over Charge Protective Voltage	*3.91V~4.00 V/Cell
5	Over Charge Release Voltage	3.50V~3.60 V/Cell
6	1st Over Discharge Protective Voltage	1.90V~1.99 V/Cell
7	2nd Over Discharge Protective Voltage	*1.80V~1.89 V/Cell
8	Over Discharge Release Voltage	2.50V~2.80 V/Cell
9	Over Temperature Alarm	56°C
10	Over Temperature Protective	60°C

• Cautions

- Never throw out battery in a fire or expose to high temperatures. Move away from the fire.
- Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.
- Do not use the battery with other maker's batteries, different types and /or models of batteries.
- Do not disassemble or alter the batteries' outside structure. Do not impact or penetrate the cell.
- Incompatible products: Conductive materials, water, sea-water, strong oxidizers and strong acids.
- Avoid direct sunlight, high temperature, and high humidity (temperature≤65°C, humidity≤95%).
- Wear neoprene or nature rubber gloves if handling a cell.
- Insure the cell has necessary protection and monitoring to voltage, current and temperature of the cell.
- In case of smoking or electrolyte spilled, cell damaged, stop using the cell immediately and the contact BYD to dispose.



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