



## LiFePO4 Battery Pack

### Specification



**Model No: HD12.8-4.0(12.8V4.0Ah)**

Designed	Checked	Approved
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## 1. Preface

This specification describes the type and size, performance, technical characteristics, warning and caution of the HD12.8-4.0(12.8V4.0Ah) LiFePO<sub>4</sub> rechargeable battery pack. The specification only applies to HD12.8-4.0(12.8V4.0Ah) LiFePO<sub>4</sub> rechargeable battery pack supplied by Haidi Energy Technology Co.,Ltd.

## 2. Product and Model

2.1 Product: HD12.8-4.0(12.8V4.0Ah) LiFePO<sub>4</sub> Battery Pack

2.2 System Configuration:

Standard pack:HD26650-3.2V-4000mAH-3.2V-4S1P



Charge/Discharge	Positive	UL1007 20AWG 100+10mm Connector:Molex-430250200
	Negative	



### 3. Battery Pack Specifications

Items	Standard	Comments
Nominal voltage	12.8V	4S
Typical capacity	4.0Ah	At 0.2C discharge rate
Max continuous discharge current	5A	
Discharge cut-off voltage	About 10V	
Charge input voltage	14.6±0.05V	Charge mode: CC/CV, Use a constant current, constant voltage(CC/CV)
Charge current	≤5A	
Inner resistance	≤140mΩ	Between positive and negative polar
Operation temperature range	Charge/ Discharge	0°C~+45°C/-20°C~+60°C
	Discharge	When the environment temperature is higher than 45°C, please pay attention to ventilation and heat rejection.
Storage temperature range	0°C~40°C (Capacity 80%)	Recommended long-term storage temperature is 15~25°C
Humidity		5%≤RH≤85%
Cabinet Material		PVC
Total Weight		0.40±0.02Kg
Size (L*W*H)		≤125*74*32mm
Protection function	Over charge protection、Over discharge protection、Over current protection、Short circuit protection, Temperature protection.	



#### 4. Standard Test Conditions

All test in this specification should be in standard atmospheric conditions: temperature:

25± 5°C, relative humidity: 65±20%.

#### 5. Characteristics

##### 5.1 Standard charge

Charge the battery with the Battery special test cabinet, supply 14.6 voltage, constant-current 0.2C(A) current until current down to 0.02C (A) .

##### 5.2 Standard discharge

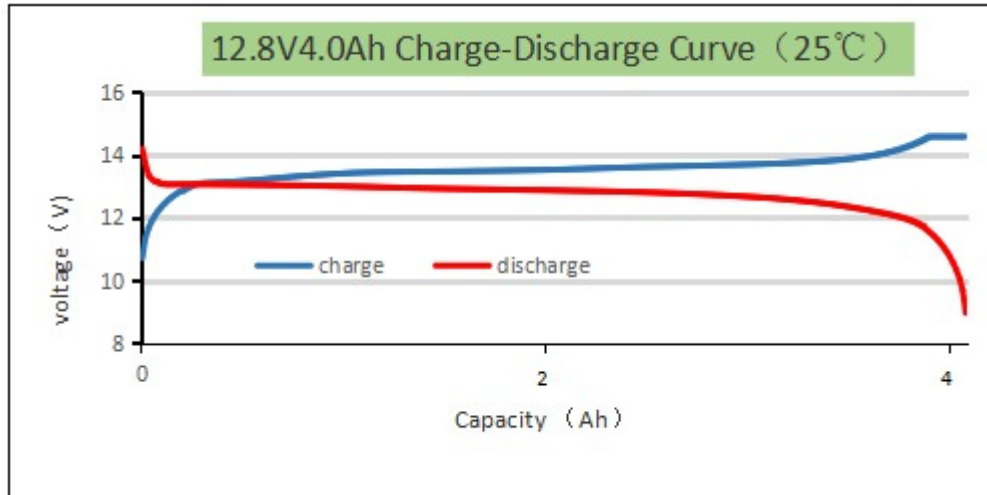
Discharge the battery at 0.2C (A) to 10V or battery cut off voltage.

##### 5.3 Electrical Performance

Test Items	Test Methods	Test Standards
Capacity retention rate	After standard charge under specified conditions, store the cells for 28 days, then discharge at 0.2C (A) to cut-off voltage.	Capacity retention rate≥80%
Cycle Life	1) Standard charge at 0.2C (A) , 2) Rest 0.5~1 h 3) Discharge at 0.2C to cut off voltage 4) Capacity retention rate≥80%	>2000cycles @ 100% DOD; >3000cycles @ 90% DOD; >4000cycles @ 80% DOD;



## 6.Characteristics Curve



## 7. Cautions

- 7.1 Charging current should not be more than maximum charge current specified in the Product Specification, Charging current bigger than recommended current may damage the battery;
- 7.2 Discharging current should be no more than maximum discharge current specified in the Product Specification; Discharging current bigger than recommended discharge current may damage the battery;
- 7.3 It should be noted that the cell would be possible to be at a over-discharged state by its self-discharge characteristics in case the cell is not used for long time. In order to prevent over-discharging, the cell shall be charged periodically to maintain between 13.2V and 13.6V (Recommended 3 months one cycle) .Over-discharging may causes loss of cell performance, characteristics, or battery functions;
- 7.4 Please charge the battery within 12 hours after use;
- 7.5 Battery storage environment follow the above conditions and in standard atmosphere, should be without strong magnet, no power, no static;
- 7.6 Do not reverse the polarity of the battery pack for any reason;
- 7.7 Do not short circuit the battery pack;
- 7.8 Do not reverse polarity charging;
- 7.9 Battery packs can be combined in series or in parallel according to the specification;



7.10 Do not immerse the battery pack in water or sea water, or get it wet;

7.11 Do not disassemble battery;

7.12 Do not expose the battery to extreme heat or flame;

7.13 Please use a compatible charger for charging;