PRODUCT SPECIFICATION

PRODUCT： $LiFePO_4$ Rechargeable Battery Pack

MODEL： 24V15Ah(26650)

MADE BY: Peng Wang

CHECKED BY: Zengchao Shi

APPROVED BY: Jihan Liu

Part Number : LFB26650H 8S5P

Tension : 24 Volts
Capacity : 15AH
Chemistry LiFePO4

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1. Preface

This specification describes the type and size, performance, technical characteristics, warning and caution of the 24V/15Ah LiFePO4 rechargeable cell. The specification only applies to 24V/15Ah LiFePO4 cell supplied by Ciblénergie

2. BATTERY TYPE AND SIZE

2.1 Cell Type and Specification

Ciblénergie LFB 26650H 8S5P —— 24V/15Ah

Manufacturing plan Battery pack specification Voltage/Capacity

2. 2 Battery Pack Dimension

The material of the battery pack is aluminum alloy .Size：200 *170*85(mm)

Output wire specification:

Anode output wire	Red two wires with 14AWG	Length：20cm
Negative output wire	Black two wires with 14AWG	Length：20cm

3. Battery Pack Specification

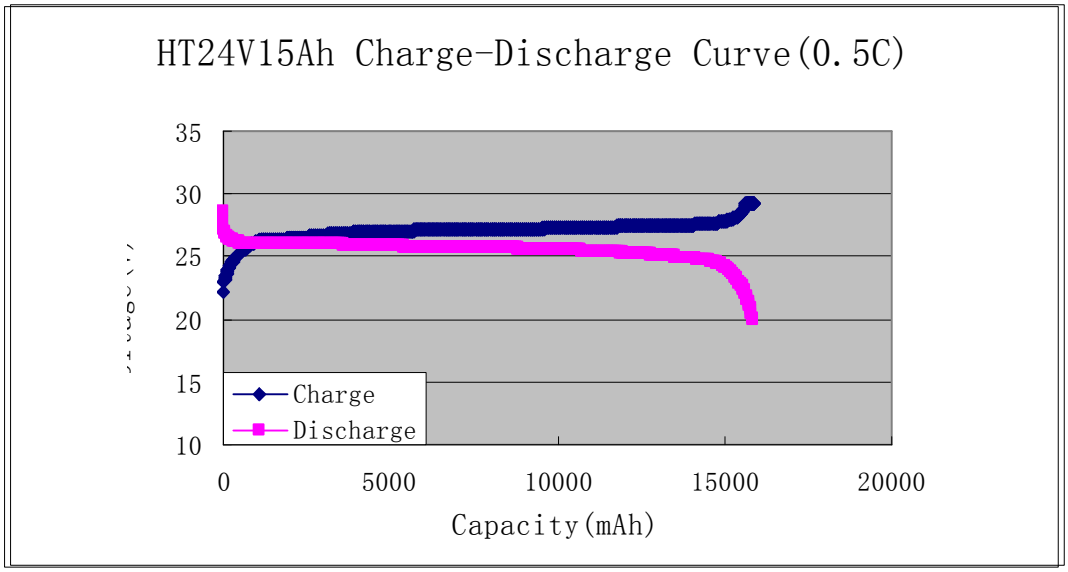
ITEM	SPECIFICATION
Cell assembled mode	5P8S-26650
Typical Capacity	15Ah(0.2C，25℃)
Minimum Capacity	14Ah(0.2C，25℃)
Nominal Voltage	24V
Charging Ending Voltage	29.2±0.1 V
Discharge Ending Voltage	20.0±0.1 V
Standard Cont.Charging Current	3.0A
Fast Cont.Charging Current	7.5A
Standard Cont.Discharge Current	3.0A
Fast Cont.Discharge Current	7.5A
MAX Cont.Discharge Current	30A
Peak Current	45A（<1S）
Internal Resistance	<100mΩ
Weight	4.0±0.2kg

4. PCM Electrical Characteristics

TYPE	FUNCTION	ITEM	PARAMETER	ACCURACY
BATTERY	Chemical system	LiFePO4		
	Capacity	15Ah		
	Working voltage	3.2V		
	Series number	8		
The function of the BMS	Overcharge protection	Over charge voltage	3.9	±50(mV)
		Output delay of overcharge	1000	±100(mS)
		Over charge release voltage	3.8	±50(mV)
	Over discharge protection	Over discharge voltage	2.5	±50(mV)
		Output delay of over discharge	200	±50(mS)
		Over discharge release voltage	2.7	±50(mV)
	Over current protection	Over current protection	70	±10(A)
		Output delay of over discharge-current protection	500	±50(mS)
		Qualification of release from over current protection	Cut off load	
	Short circuit protection	Short circuit protection current	120	±20(A)
		Output delay of short protection	200	±100(uS)
		Qualification of release from short protection	Cut off load	
	Temperature protection	Temperature protection (℃)	65	±2(℃)
		TemperatureProtection Release (℃)	55	±2(℃)
	Cell balance	Bleed Current (mA)	60	±60(mA)
		Bleed Start Point（V）	3.6	±10(mV)
		Bleed Accuracy（mV）	30	±5(mV)
	Main circuit resistance	Main circuit resistance（mΩ）	<50	
	Current Consumption	Current Consumption (mA)	<2	

5. Test

5.1 Battery Charge/Discharge Curve



5.2 Vibration test

Pack installed onto the vibration desk with clamps. Equipment parameters are as follows:
a: direction: up and down single vibration
b: frequency: 10～55Hz
c: max acceleration: 30m/s^2
d: amplitude: 0.38mm
e: time: 10min.
During the test , Nickel film without shedding ,no scratch, the voltage is OK.
the voltage is OK.

5.3 Drop test

Packs dropped from a height of 0.5 meter to cement ground, packs shall be dropped in each of three mutually perpendicular directions.Total drop times are 6. After that, Nickel film without shedding, no scratch, the voltage is OK.

6. Battery Operation Instructions And Notes

6.1 Battery Operation Instructions

1. Charge：Connecting the battery pack to the charge controller, connect the charger to recharge.
2. Discharge：Connecting the battery pack to the load ,connect the load to discharge.
3. When you combine the battery with series or parallels, if there are oxidation layer on the surface, you should brush surface to the metal glow with thin steel brush to lower the connective resistance to the minimal resistance.
4. When combining with many batteries, if the voltage between the two electrodes is over 36V, the safe voltage for human beings, to guarantee the safety, you should not touch the two electrodes with your body.

6.2 Notes

1. If shelve a long time suggested that the battery voltage 26.4V-27.2V, need for regular recharging (even if not use), must charge and discharge for three months one time;
2. Do not expose the battery to extreme heat or flame.
3. Do not short circuit, over-charge or over-discharge the battery pack;
4. Do not disassemble or modify the battery pack.
5. Do not handle or store with metallic like necklaces, coins or hairpins, etc.

6. Do not reverse the polarity of the battery pack for any reason.
7. Do not immerse the battery pack in water or sea water, or get it wet.
8. Use a constant current, constant voltage (CC/CV) lithium-ion (Li+) battery charge controller.

7.Warranty Period& Product Liability

Warranty period begins from the delivery date, and is exclusively continued 6 months.

Ciblénergie is not responsible for the incident caused by not obeying the specifications.

When the specification is modified, Ciblénergie does not inform the customer.

Before using the battery, you should read the specifications,usage instruction and some attentions carefully to learn its application method and areas. If the phenominon such as error using method or wrong circuit connection,or input power data,working index are inconsisted with the specifcations happen and cause damage to production,circuit and its accesaries, we are not responsible for it.

Special cautions

Due to the voltage between two electrodes over the safe voltage of human beings, nobody should touch the two electrodes by his body in case of his safety. During using the battery, you need insulate the two electrode terminals and also the part outside the metal conductor, in order to prevent the short-circuit incident. You should do the related safety-prevention work well.