



PRODUCT SPECIFICATION

DOC NO :

EB-20110208

REV : A

PAGE: 1 of 6

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PRODUCT: LiFePO₄ Rechargeable Battery Pack

MODEL: 12V12Ah(26650)



PRODUCT SPECIFICATION

DOC NO :
EB-20110208
REV : A
PAGE: 2 of 6

Contents

| | |
|----------------------------------------------|---|
| 1. Preface | 3 |
| 2. Battery Type and Size..... | 3 |
| 2.1 Battery Type and Specification | 3 |
| 2.2 Battery Pack Dimension | 3 |
| 3. Battery Pack Specification | 3 |
| 4. PCM Electrical Characteristics | 4 |
| 5. Test..... | 5 |
| 5.1 Battery Charge/Discharge Curve | 5 |
| 5.2 Vibration Test..... | 5 |
| 5.3 Drop test | 5 |
| 6. Usgae methods and Cautions | 5 |
| 6.1 Usgae methods..... | 5 |
| 6.2 Cautions | 6 |
| 7. Warranty Period & Product Liability | 6 |

PRODUCT SPECIFICATION

DOC NO :
EB-20110208
REV : A
PAGE: 3 of 6

1. Preface

This specification describes the type and size, performance, technical characteristics, warning and caution of the GEB-12V/12Ah LiFePO₄ rechargeable pack. The specification only applies to 12V/12Ah LiFePO₄ pack supplied by UJ d { Åã } Åæ & Å

2. BATTERY TYPE AND SIZE

2.1 Pack Type and Specification

12V/12Ah

Battery pack specification Voltage/Capacity

2.2 Battery Pack Dimension

The material of the battery pack is PVC .Size: 187 *127*67 (mm)

Output wire specification

| | | |
|--------------------------------|---------------------------|--------------|
| Positive charge input wire | Red one wire with 18AWG | Length: 20cm |
| Negative charge input wire | Black one wire with 18AWG | Length: 20cm |
| Positive discharge output wire | Red one wire with 18AWG | Length: 20cm |
| Negative discharge output wire | Black one wire with 18AWG | Length: 20cm |

3. Battery Pack Specification

| ITEM | SPECIFICATION |
|---------------------------------|--------------------|
| Pack assembled mode | 4P4S-26650 |
| Typical Capacity | 12.0Ah(0.2C, 25°C) |
| Minimum Capacity | 11.5Ah(0.2C, 25°C) |
| Nominal Voltage | 12.8 V |
| Charging Ending Voltage | 14.6±0.1 V |
| Discharge Ending Voltage | 10.0±0.1 V |
| Standard Cont.Charging Current | 2.4A |
| Fast Cont.Charging Current | 6.0A |
| Standard Cont.Discharge Current | 2.4A |
| Fast Cont.Discharge Current | 6.0A |
| MAX Cont.Discharge Current | 18A |
| Peak Current | 24A (<1S) |
| Internal Resistance | <100mΩ |
| Weight | 2.8±0.2kg |

PRODUCT SPECIFICATION

DOC NO :
EB-20110208
 REV : A
 PAGE: 4 of 6

4. PCM Electrical Characteristics

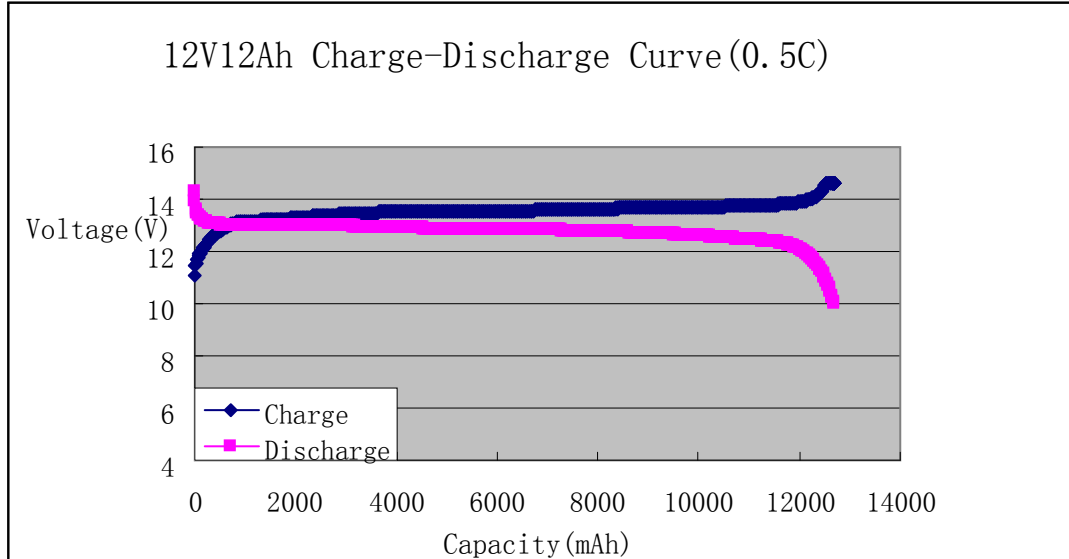
| TYPE | FUNCTION | ITEM | PARAMETER | ACCURACY |
|-------------------------|---------------------------|-------------------------------------------------------|--------------|----------|
| BATTERY | Chemical system | LiFePO ₄ | | |
| | Capacity | 12Ah | | |
| | Working voltage | 3.2V | | |
| | Series number | 4 | | |
| The function of the PCM | Overcharge protection | Over charge voltage | 3.9 | ±50(mV) |
| | | Output delay of overcharge | 1000 | ±100(mS) |
| | | Over charge release voltage | 3.7 | ±50(mV) |
| | Over discharge protection | Over discharge voltage | 2.5 | ±50(mV) |
| | | Output delay of over discharge | 40 | ±50(mS) |
| | | Over discharge release voltage | 2.7 | ±50(mV) |
| | Over current protection | Over current protection | 30 | ±2(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 | 90 | ±10(A) |
| | | Output delay of short protection | 200 | ±100(μS) |
| | | Qualification of release from short protection | Cut off load | |
| | Temperature protection | Temperature protection (°C) | 65 | ±2(°C) |
| | | TemperatureProtection Release (°C) | 55 | ±2(°C) |
| | Cell balance | Bleed Current (mA) | 100 | ±60(mA) |
| | | Bleed Start Point (V) | 3.60 | ±10(mV) |
| | | Bleed Accuracy (mV) | 30 | ±5(mV) |
| | Main circuit resistance | Main circuit resistance (mΩ) | <50 | |
| | Current Consumption | Current Consumption (mA) | <2 | |

PRODUCT SPECIFICATION

DOC NO :
EB-20110208
REV : A
PAGE: 5 of 6

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. Usage methods and Cautions

6.1 Usage methods

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 Cautions

1. If shelve a long time suggested that the battery voltage 13.2V-13.6V, 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.

PRODUCT SPECIFICATION

DOC NO :

GEB-20110208

REV : A

PAGE: 6 of 6

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.

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.