



# Specification Document

DOC NO: SVB 3230 EV

Edition NO: A

Page no: 01/08

## Product Specification Document

Model: SVB-LFP16215160

Nominal capacity: 30Ah

Date: 2012 -1 1 -5

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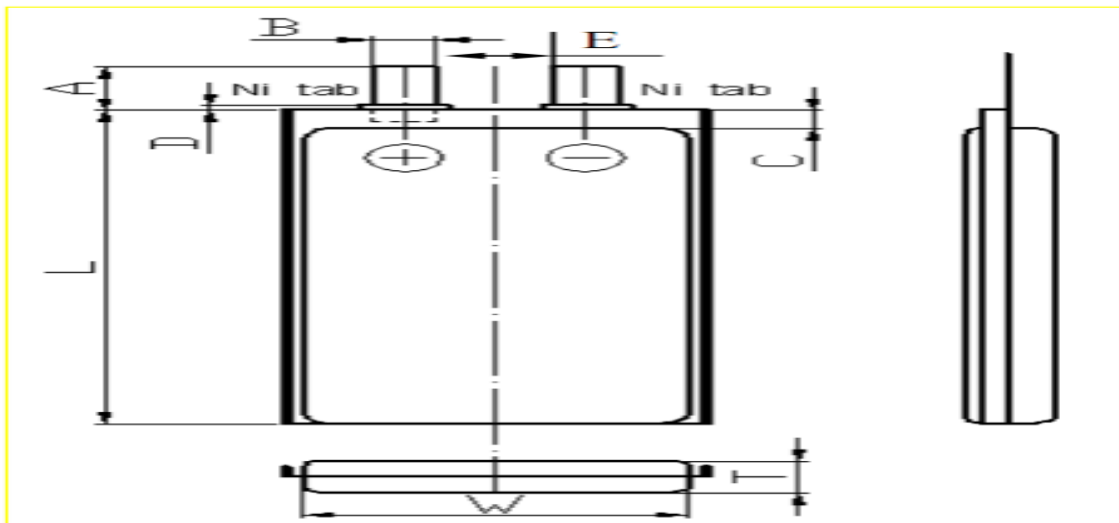
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## 1. scope of application

This product specification has described the performances of GEB-LFP16215160, which is widely used in solar battery system, electric car battery, Storage Equipment and so on.

2.model: SVB-LFP16215160

3.dimension:



Item	describe	Dimension(mm)
T	Thickness	$\leq 16$
W	Width	$\leq 215$
L	Length	$\leq 160$
A	Length of tabs excursion	$30.0 \pm 3.0$
B	Width of tabs excursion	$40.0 \pm 0.5$
E	Gap of tab excursion	$67.0 \pm 2$



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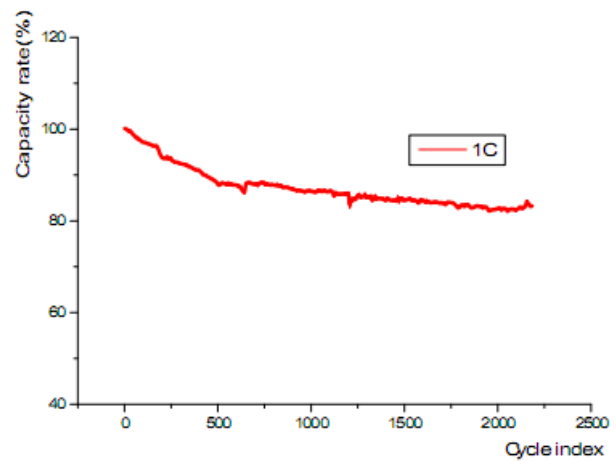
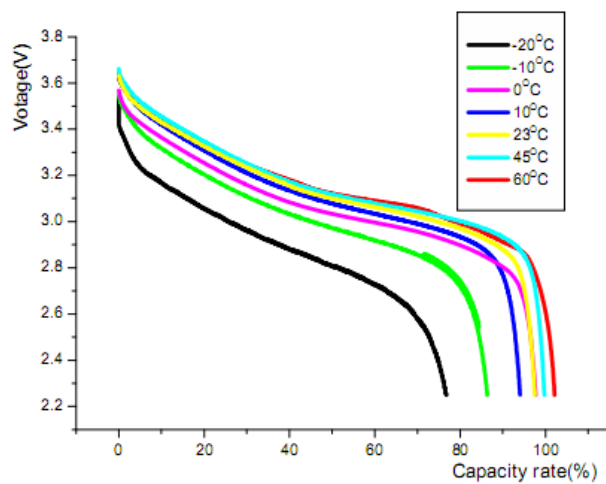
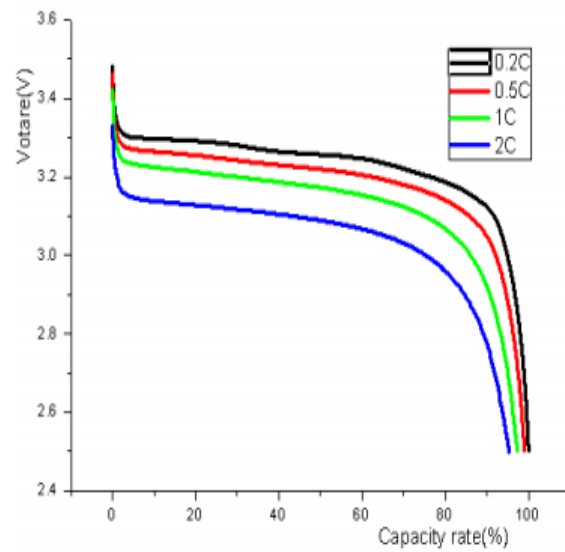
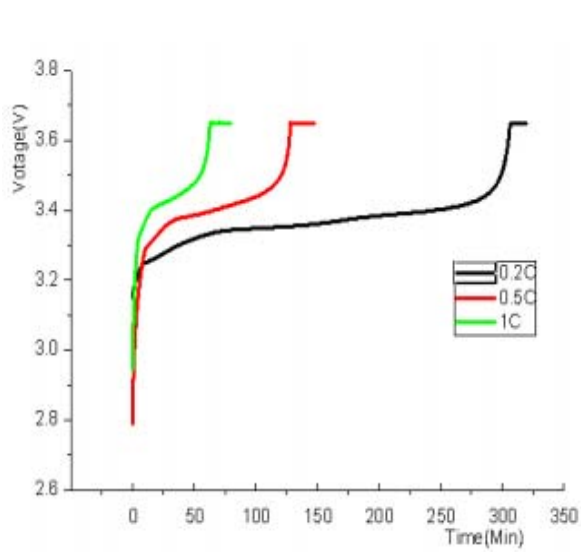
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## 4. standard:

No	Item	Description
1	Nominal capacity	30.8Ah@ 0.2C discharge
2	Minimal capacity	30Ah@ 0.2C discharge
3	Nominal voltage	3.2V
4	internal resistance	≤6mΩ
5	Charging voltage	3.65 V
6	Charging current	Standard charging: 0.5C Fast charging: 1C
7	Standard charge method	0.5C constant current (CC) charge to 3.65V, constant voltage to 3.65V (CV)
8	Charge time	Standard charge: 3.5h Fast charge: 2.5h
9	Maximum pulse discharge current	5.0 C
10	Maximum continuous discharge current	2.0 C
11	Discharge by voltage	2.5V
12	operating temperature	charge: 0° C ~ 55° C discharge: -20° C ~ 60° C
13	storage temperature	-10°C ~ 45°C
14	Storage Humidity	<85%
15	Weight	910g±20g

## 5. battery performances

### 5.1 characteristic curve



### 5.2 electrical performance



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No	Item	standard	Test method
1	Normal discharge performance	Discharge capacity/nominal capacity A) 0.2C5A ≥100% B) 0.5C5A ≥98% C) 1C5A ≥95% D) 2C5A ≥90% Charge-discharge curve should be smooth and steady	With one standard atmospheric pressure, ambient temperature 25 °C ± 5 °C, relative humidity 45% ~ 80% condition, after standard charged, aside 10mins, respectively with 0.2C5A、0.5C5A、1C5A、2C5A discharge to 2.5V. Cycle three times, if one time reach the standard, then meet requirements.
2	By normal temperature electric keep ability	residual capacity ≥ nominal capacity*85% Recovery capacity ≥ nominal capacity*90% Open voltage reduced rates ≤ 3% Resistance increase rates ≤ 20%	Measurement initial condition and initial capacity of battery, after standard charged, aside 30 days, measure battery condition, with 0.5C5A discharge to 2.5V, Measuring residual capacity of the battery. with 0.5C5A/0.5C5A measure Recovery capacity of battery, Cycle three times, if one time reach the standard, then meet requirements.
3	Circle life	capacity ≥ nominal capacity*80%	Measurement initial condition and initial capacity of battery, with 1C5A charge/discharge, recycle, test end condition after 2000 times.
4	Storage performance	0.2C5A discharge time Over 3 month storage time ≥ 4.5h; Over 6 month storage time ≥ 4.25h; Over 12 month storage time ≥ 4.0h.	Measurement initial condition and initial capacity of battery, charge battery to 3.65V, keep in storage 3 month, 6 month and 12 month separately, measure end condition of battery, then with 0.2C5A/0.2C5A discharge, recorder the discharge time.



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## 5.3 safety performance.

No	Item	Standard	Test method
1	Overcharge performance	No explosion, not on fire Highest temperature <130°C	After standard charging, measure initial condition of battery, ensure battery with good condition, with 3C5A charge battery to 10V, Turn constant pressure charges to by the current 0.01C5A end, observe temperature and appearance of battery
2	Discharge performance	No explosion, not on fire	After standard charging, measure initial condition of battery, with 1C5A discharge to 2.5V, then use 100mΩ resistance connect positive pole with negative pole, aside 14 days, observe appearance of battery.
3	Short circuit performance	No explosion, not on fire Highest temperature <130°C	After standard charging, measure initial condition of battery, put in explosion proof glass cap, short circuit positive pole and negative pole, test over when battery temperature down to 10 °C than peak. Observe appearance of battery.
4	Thermal shock safety performance	No explosion, not on fire	Measuring the original form of the battery, the battery charging standard, placed in the hot box, and connected with thermocouples, temperature to (5 ± 2 °C) / min rate rose to 130 + 2 °C and heat preservation 10 min. Observation battery appearance changes



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## 6. Appearance inspection

Not allowed to have anything that affect battery performance cosmetic defects, such as crack, crack, leakage, etc.

## 7. Standardized testing environment

Unless otherwise specified, this specification of all tests is in the following condition.

temperature:  $25\pm 5^{\circ}\text{C}$

humidity:  $65\pm 20\% \text{RH}$

## 8. storage and others

Long-term storage battery (exceed 3 months) must be placed in dry, cool place. Every six months the battery should be recharge once, storage voltage is  $3.2\sim 3.35\text{V}$ . and storage environment should be as 7.

## 9. quality guarantee period and product responsibility

Quality guarantee period is 6 months from the date of production.

## 10. packaging

- The following warning shall be marked in the packing the battery
- Use the standard charger
- Don't put into the fire for heating
- Don't take on both ends of the battery short-circuit
- Don't make battery decomposition apart

## 11. warning and notice

To prevent battery may leakage occurs, fever, explosion, please pay attention to the following

precautionary measures:

Warning:

-It is strictly prohibited to put battery into sea water or water, when not use, should be placed

in a cool and dry environment.

-Banned put battery near high temperature, such as fire, heater, the use and detention.

-Please choose to charge for lithium ion battery charger.

-It is strictly prohibited to put battery into power socket directly.

-it is strictly prohibited to put battery together with hairpin, necklace

-Ban struck or throwing, trample and bend batteries

-Prohibit direct welding battery with nails or other edge tool and stabbed in the battery.