



Datasheet

Model LiFePo4 12.8V 6.000mAh

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This specification is applies to describe the related battery product in this Specification and the battery/cell supplied by EREMIT

All cells within this pack are originally produced by Bixell Technology limited. For further informations related to this product please contact us first.

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Number	Description	Ratings	Remarks
1;	Nominal Capacity	6000mAh	At 0,2C CC discharge
2;	Minimal capacity	>6000mAh	
3;	Nominal Voltage	12.8V	
4;	Delivery voltage	12.4 V	On delivery
5;	Charge voltage	14.6V	
6;	Standart Charging	0.2C Standart	6 hour nominal
		1C max.	1.5 hour rapid
7;	Standart discharging	1C CC to 8.0V	6A
		3C max.	18A
		5C Pulse	Pulse below 1 second. Higher pulse cause the protection to switch off

8;	Cell internal impedance	≤80mOhm	Measured at 1khz after 50% Charge
9;	Operating temperature	0-45°C	Maximum -10° - 60°C
		Recommended	10 - 34°C
10;	Internal Chemical charact.	IFR	Lithium-Iron-Phosphate

10; Long time storage (-5°C – 30°C)

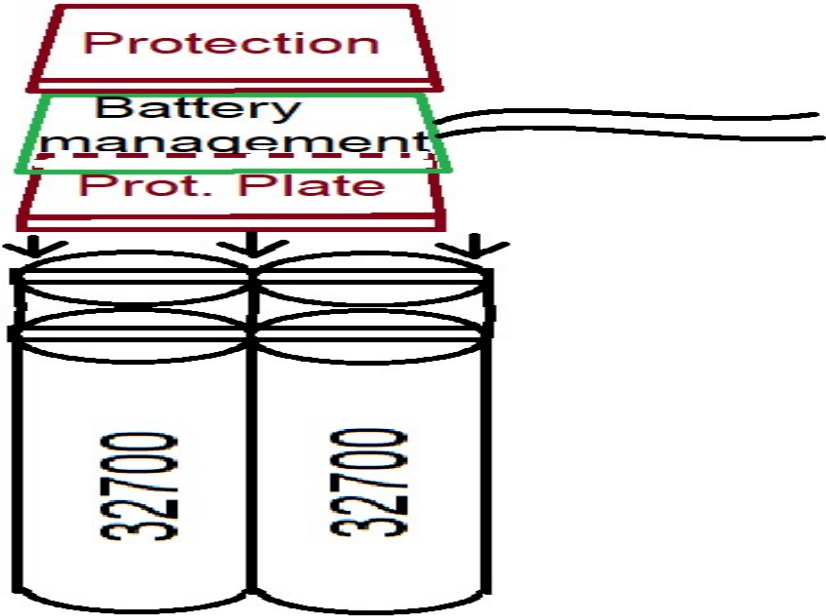
If the battery need be stored for a long time, the voltage should be 13.2V, and stored in the condition as storage proposal. It need at least one charge & discharge cycle every year.

Maximum sizes: 65 x 65 x 82mm

Maximum weight: 612gramm

Battery Characteristics

Number	Description	Ratings	Remarks
1;	Standart Charge	Charging cell initially with constant current at 0.2C to 14.6V, then with constant voltage at 14.6V till charge current is below 0.02C	
2;	Rated capacity	Capacity means the discharge capacity of the cell, which is measured with discharge current of 1C with 9.0V cut-off voltage after standard charge.	>6000mAh
3;	Cycle life	Test condition: Carge 1C to 14.6V -> discharge 1C to 8.0V 80% or more of 1 st cycle capacity at 1C discharge of operation	>2000
4;	Self discharge	After standart charging stored 1 month under storage condition descriped in page 2; then measured the capacity with 0.2C till 9.0V	Above 98% residual capacity



Protection circuit Data

Item	Symbol	Content	Criterion
Over charge Protection	V_{DET1}	Over charge detection voltage	$3.65 \pm 0.05V$
	tV_{DET1}	Over charge detection delay time	$0.015 \sim 0.14s$
	V_{REL1}	Over charge release voltage	$3.45 \pm 0.05V$
Over discharge protection	V_{DET2}	Over discharge detection voltage	$2.0 \pm 0.1V$
	tV_{DET2}	Over discharge detection delay time	$95 \sim 173ms$
	V_{REL2}	Over discharge release voltage	$2.5 \pm 0.10V$
Over current protection	V_{DET3}	Over current detection voltage	N/A
	I_{DP}	Over current detection current	$22 \sim 30A$
	tV_{DET3}	Detection delay time	$0.1 \sim 50S$
		Release condition	Cut load
Short protection		Detection condition	Exterior short circuit
	T_{SHORT}	Detection delay time	$50\mu s$
		Release condition	Cut short circuit
Interior resistance	R_{DS}	Main loop electrify resistance	$V_C = 3.6V ; R_{DS} \leq 16m\Omega$
Balancer	B_C	Balancer working voltage	$3.55V$
Balancer	B_C	Balancing current	$63mA \pm 10mA$
Current consumption	I_{DD}	Current consume in normal operation for full board	$25\mu A$ Type $50\mu A$ Max

Over-Discharge

Short time over discharge does not affect the battery function, but long time over discharges can damage battery performance, and also lead the cells to die. due to its own self-discharge characteristics the battery also lead to over-discharge. To prevent over-discharge occurs, the battery should maintain a certain electric quantity, the cells shall be charged to above 3.1V each cell (12.4V total), and after can be stored for over 6 month in above mentioned condition.

Over-discharging may causes loss of cell performance, characteristics, or battery functions. voyage specified in the Product Specification. Also the charger shall be equipped with a device to control the charging current, as battery pack does not having an over-current protection for charging. procedures as follows:

Charging current : Do not surpass the largest charging current that specification stipulated.

Charging voltage : Do not surpass the highest limited voltage that specification stipulated.

Charging temperature : within temperature scope that specification stipulated.

Charge with constant current, then with the constant voltage, no reverse charge, which is dangerous

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No.	Part Name	Description	Q'ty	Remark
1	Cell/Pack	LiFePo4-12.8V-6000mAh	1	
2	Patterns Tape	Shrink tube, double walled acryl tape	1	
3	PCM	Hexfet Power FET ILR8726	1	
4	Wire	AWG18	2	

12. Handling of Cells

12. Warning and cautions in handling the lithium-ion cell

To prevent the possibility of the cell from leaking, heating, explosion, please observe the following

precautions:

- Don't immerse the cell in water.
 - Don't use and leave the cell near a heat source, such as fire or heater.
 - Don't reverse the positive and negative terminals.
 - Don't connect the cell to an electrical outlet directly.
 - Don't discard the cell in fire or heater.
 - Don't connect the positive and negative terminal directly with metal objects.
 - Don't transport and store the cell together with metal objects such as necklaces, hairpins.
 - Don't strike, throw or trample the cell.
 - Don't directly solder the cell.
 - Don't pierce the cell with a nail or other sharp object.
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- **Caution**
 - If the cell leaks and the electrolyte get into your eyes, don't wipe eyes, instead, thoroughly rinse the eyes with clean running water for at least 2 minutes, and immediately seek medical attention. Otherwise, eye injury can result.
 - If the cell gives off an odor, generates heat, becomes discolored or deformed, or in any way appears abnormal during usage, recharging or storage, immediately remove it from the device or cell charger and stop using it.

Period of Warranty

The period of warranty is 2 year from the date of shipment. Replacement is guaranteed within warranty if battery with defects proven due to manufacturing process instead of the customer's abuse and misuse.

For further warranty regulations please check country-specific regulations made by eremit.

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