



12V LITHIUM IRON PHOSPHATE BATTERY PACK

GA-LFP12150S

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Version information

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1. Summary

This 12V Lithium Iron Phosphate battery pack is designed and manufactured by Glory Energy (Shenzhen) co., LTD. It is widely used in Energy Storage System, Instrument, Medical Equipment, Financial/Commercial Equipment, Security/Electric Power Equipment, Robot etc. It could replace 12V Lead Acid battery pack, it is environmental-friendly, and with long service life. This article mainly describes its appearance, size, electrical specifications, warning and tips, etc.

This product supports Bluetooth connection with smart devices, which can be used to monitor battery status, such as overall voltage, current, temperature, SOC, FCC, and cycles.

2. Technical Specification

2.1. Battery Pack Specification

No.	Item	Unit	Value	Remark
01	Cell Model	-	LFP 3.2V 50Ah	Prismatic Cell
02	Combination Mode	-	3P4S	
03	Nominal Capacity	Ah	150	
04	Rated energy	Wh	1920	
05	Initial Internal Resistance	mΩ	<75	AC 1KHz
06	Rated Voltage	V	12.8	
07	Recommended charging voltage	V	14.2	
08	Discharge Cut-off Voltage	V	10	
09	Standard Charge Current	A	30	0.2C
10	Max. Charge Current	A	≤150	
11	Standard Discharge Current	A	75	
12	Max. Discharge Current	A	≤150	
13	-20℃ Discharge Capacity		≥65% Nominal Capacity	
14	Cycle life	-	≥3500 times	DOD>80%
15	Operating Temperature	℃	-0~+45℃	Charge
			-10~ +60℃	Discharge
16	Open Circuit Voltage	V	12.8-13.6	
17	Shell type	-	ABS Plastic Shell	
18	Weight	kg	18	About
19	Dimension	mm	483(L)*170(W)*240(H)	Exclude wiring terminal



2.2. Protection Board Specification

No.	Item	Unit	Value	Remark
01	Overcharge Protection Voltage	V	$3.85V \pm 25mV$	Single Series Protection
02	Overcharge Protection Release Condition	V	$3.6V \pm 50mV$	
03	Over Discharge Protection Voltage	V	$2.5 \pm 80mV$	Single Series Protection
04	Over Discharge Protection Release Condition	V	$2.7 \pm 100mV$	
05	Charge Over Current Protection	A	$120A \pm 15A$	
06	Charge Over Current Delay Time	S	5 ± 1	
07	Discharge Over Current Protection_1	A	$180A \pm 15A$	
08	Discharge Over Current Delay Time _1	S	5 ± 1	
09	Discharge Over Current Protection _2	A	$375A \pm 15A$	
10	Discharge Over Current Delay Time_2	S	2 ± 1	
11	Discharge Over Current Release Condition	-	Cut off load , Charge Current > 0.8A	
12	Short Circuit Protect Condition	-	External Short Circuit	
13	Short Circuit Protect Delay Time	uS	200-800	
14	Short Circuit Protect Release Condition	-	After cutting off load,	
15	Charge Low Temperature Protect	°C	$-5 \pm 2^{\circ}C$	
16	Charge Low Temperature Protection Release Condition		$0 \pm 2^{\circ}C$	
17	Charge High Temperature Protect		$55 \pm 2^{\circ}C$	
18	Charge High Temperature Protection Release Condition		$50 \pm 2^{\circ}C$	
19	Discharge Low Temperature Protect		$-10 \pm 2^{\circ}C$	
20	Discharge Low Temperature Protection Release Condition		$-5 \pm 2^{\circ}C$	
21	Discharge High Temperature Protect		$65 \pm 2^{\circ}C$	
22	Discharge High Temperature Protection Release Condition	°C	$55 \pm 2^{\circ}C$	

3. Battery Pack Structure Description

3.1. Cell Module

This 3P4S cell module is made by 12pcs prismatic Lithium Iron Phosphate Cell.

3.2. Protection Board

It protects and manages the battery's charge and discharge, provides protection against overcharge, over discharge, current overload, high temperature, short circuit, and could achieve cell balance.

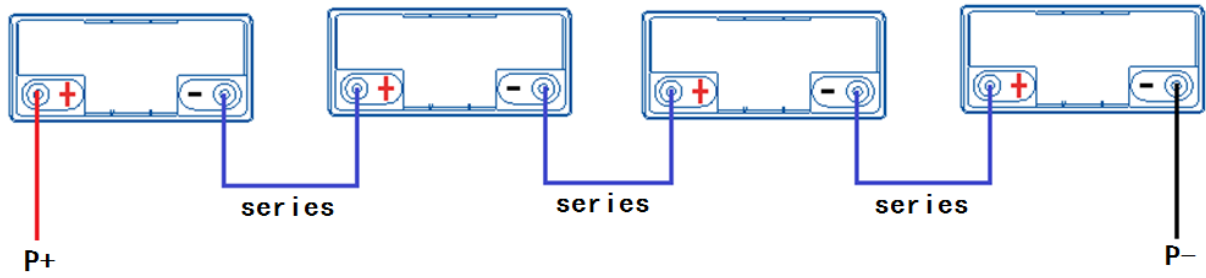
3.3. Shell

ABS plastic shell, standard size shell, convenient to replace.



3.4. Using

Allow series with maximum 4 packs. Each pack should be charged fully before series.

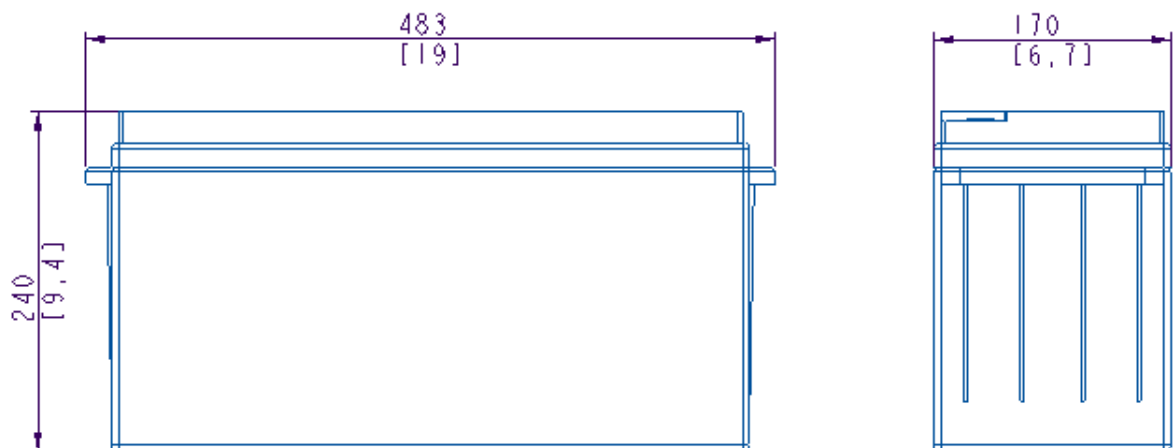


4. Appearance

4.1. View



4.2. Dimensional drawing





5. Storage and Transportation

5.1. Storage

When the product is not in use for a long time, please put it in a dry and ventilated place to avoid inflammable and explosive articles; charge and maintain the battery pack regularly every three months to ensure that the battery is in the best performance state.

5.2. Transportation

Battery pack should be packed with outer packing before they can be transported. In the course of transportation, severe shock, shock or extrusion should be prevented, and sunshine and rain should be prevented.

6. Warning and Tips

- 6.1. Never put batteries in water or wet them.
- 6.2. It is forbidden to charge and use batteries outside the temperature range we prescribe. Do not store, charge and use this product near the source of fire or heat.
- 6.3. When the battery pack emits odor or leaks, it should stop using or charging immediately, and move to an open ventilated place, away from the source of fire, and contact us in time.
- 6.4. Do not connect the positive and negative poles in connection with the load.
- 6.5. Do not short-circuit the positive and negative poles of the battery pack with metal conductors
- 6.6. Do not put the battery pack into the fire or heat it.
- 6.7. It is strictly forbidden to dissect the battery pack artificially, to pierce the battery pack with nails or sharp objects, to strike the battery pack with hammers or other external forces, and to trample and drop the battery pack artificially.
- 6.8. It is strictly forbidden to put batteries in microwave ovens or pressure vessels.
- 6.9. If any abnormal phenomena occur during charging or using, please stop charging and using immediately.
- 6.10. The optimum operating temperature of the product is $25\pm5^{\circ}\text{C}$. If the product is not in this temperature range, the function can be affected, the discharge capacity will be reduced, and do not disassemble the battery pack without permission.
- 6.12. The above test is for new batteries whose arrival time is not more than one month.