GreatVolt | Model Number: GV12100SP

Spark

GreatVolt Spark

12.8V 100Ah LiFePO4 Battery for RV & Van, Marine & Trolling Motor, Solar & Off-Grid.

- IP67 Waterproof
- Heating Function
- Long Life
- Zero Maintenance
- Ultra Safe
- Light Weight
- With Bluetooth
- Full Temp Protections
- Fast Charging
- Pulg& Play

*100A continuous | 200A surge for 5 seconds | 500A surge for 2 seconds

*Note: This built-in protection wil reset after five seconds in most faut conditions. isconnecting the battery from loads will also reset the BMS.

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SPARK TECHNICAL SPECIFICATIONS

Electrical Specifications

Nominal Voltage	12.8V
Nominal Capacity	100Ah
Energy	1280Wh
Self Discharge	2-3% Per Month
Maximum Batteries in Series	4
Maximum Batteries in Parallel	4
Built-in BMS	Internal
Resistance	<10 mΩ
Cell Chemistry	LiFePO4(Lithium Iron-Phosphate)

Mechanical Specifications

Dimensions	10.21"L X 6.61"W X 8.46"H
Weight	24.5 lbs.
Terminal Type	M8
Terminal Torque	619~974in-lbs(70~110N-m)
Case Material	ABS
Waterproof Level	IP67

Charging Specifications

Recommended Charge Current	0.2C/20A
Max Charge Current	50A
BMS Charge Current Protection	100A
Recommended Charge Voltage	14.6V
Reconnect Voltage	@ 13.2V
Balancing Voltage	@ 3.2V Per Cell
Charge Protection Voltage	15V

Integrated Heating Specifications

Heat	Integrated Heating Technology
Heating ON	Auto ON- > 10A and < 0°C
Heating OFF	Auto OFF- > 5°C
Continuous Power Draw (When Enabled)	50W
Required Minimax Charging Current	>10A

Discharging Specifications

Max Discharge Current	100A
Discharge Surge Current1	120A for 60 seconds
Discharge Surge Current2	200A for 5 seconds
Surge for Loads Over	500A for 2 Seconds
Recommended Low Voltage Disconnect	11.2V
BMS Discharge Cut-Off Voltage	10V
Reconnect Voltage	12V
Short Circuit Protection	Yes

Certifications

Certifications	UL1973,UL9540A,IEC62619 for cells MSDS for shipping UN38.3

Temperature Specifications

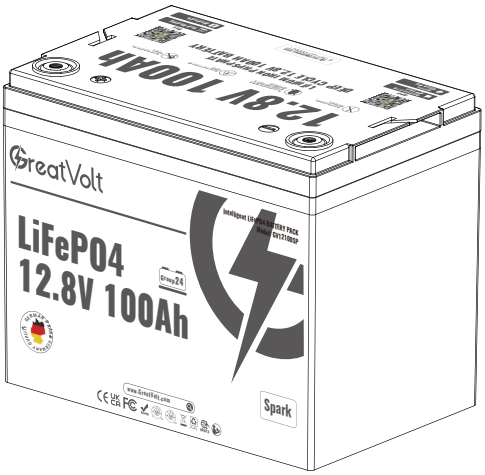
Discharge Temperature	-4°F to 140°F(-20°C to 60°C)
Charge Temperature	32°F to 122°F(0°C to 50°C)
Storage Temperature	32°F to 95°F(0°C to 35°C)
Reconnect Temperature	Discharge 131 °F (55°C) Charge 113 °F (45°C)

Communication Protocols

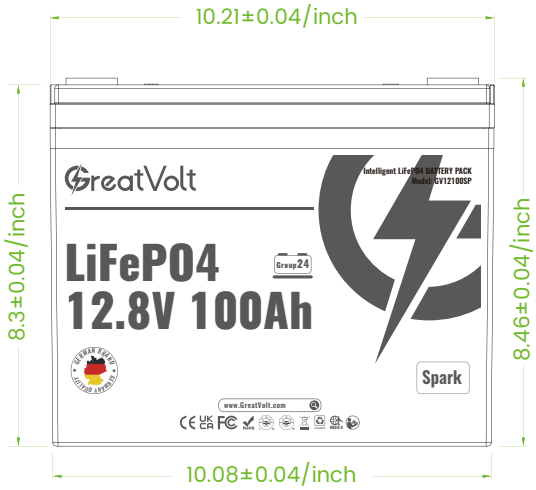
CAN	×
RS485	×
UART	×
Bluetooth	√

* Heating - Charging in Subzero Weather will Automatilly turn on heating function.
* Storage - Please keep the battery in the cool and dry environment: Within 1 month -5°C~35°C or Within 6 months 0°C~35°C, relative humidity ≤75%, please charge the battery pack (around 50% SOC) regularly (every 60-90 days) to keep its chemistry active and longer lifespan. Long shelf time without charging the battery, the battery may completely depleted or totally died. Please DO remove the battery from your device when battery NOT IN USE for long time.

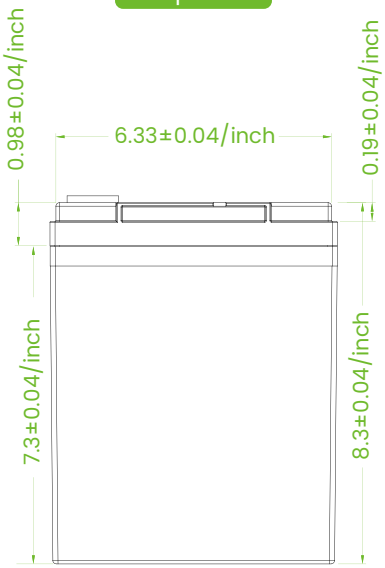
MICHANICAL DRAWING



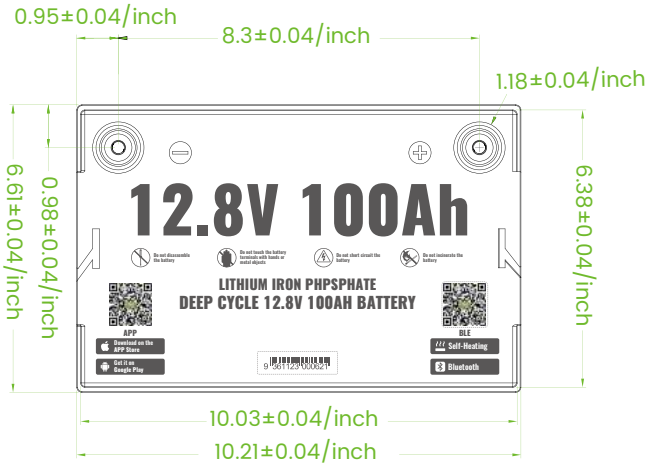
Perspective



Front view



Side view



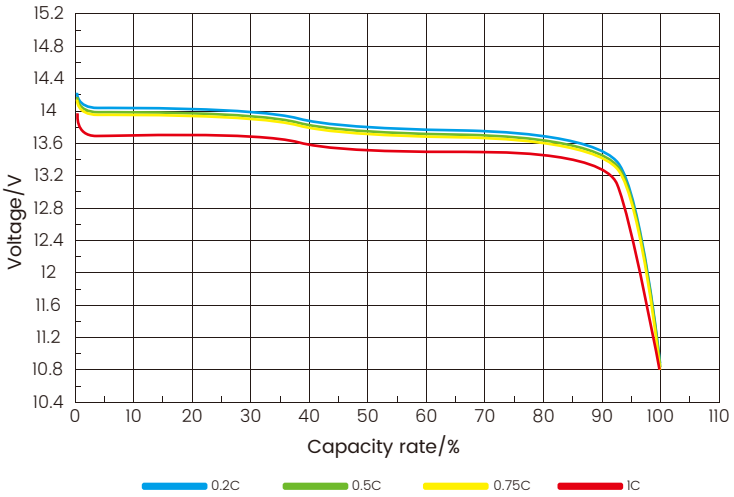
Top view

Rear view

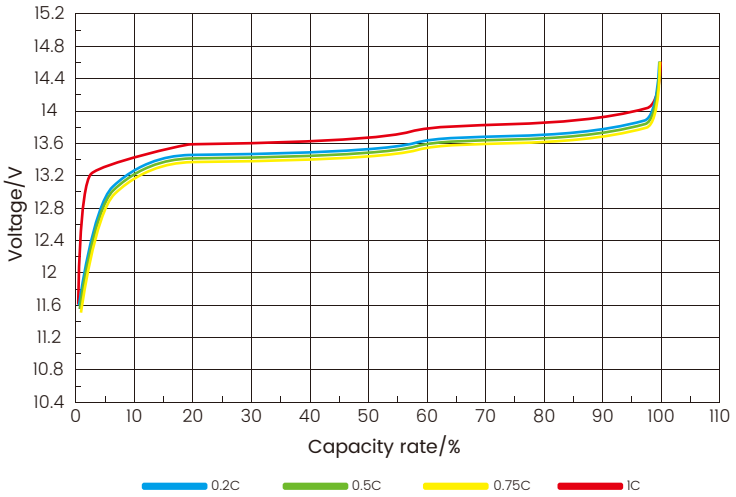
Perspective

RATE CHARGE-DISCHARGE CURVE

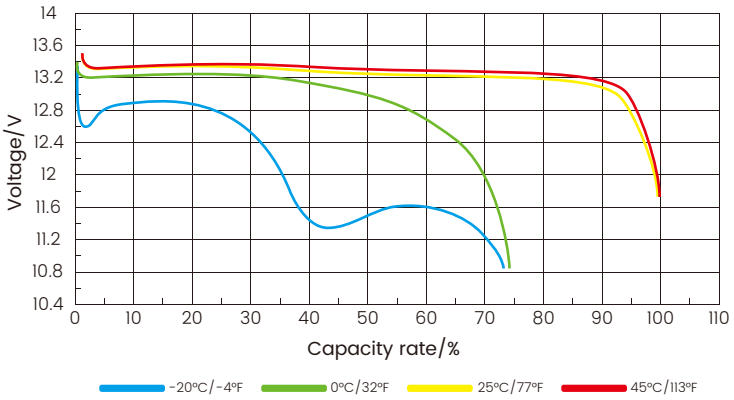
Discharge tests were performed at 25°C/77°F



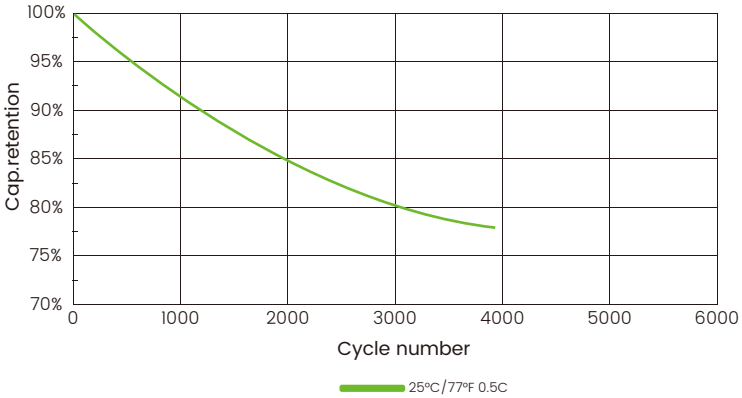
Charging tests were conducted at 25°C/77°F



0.2C High and low temperature discharge

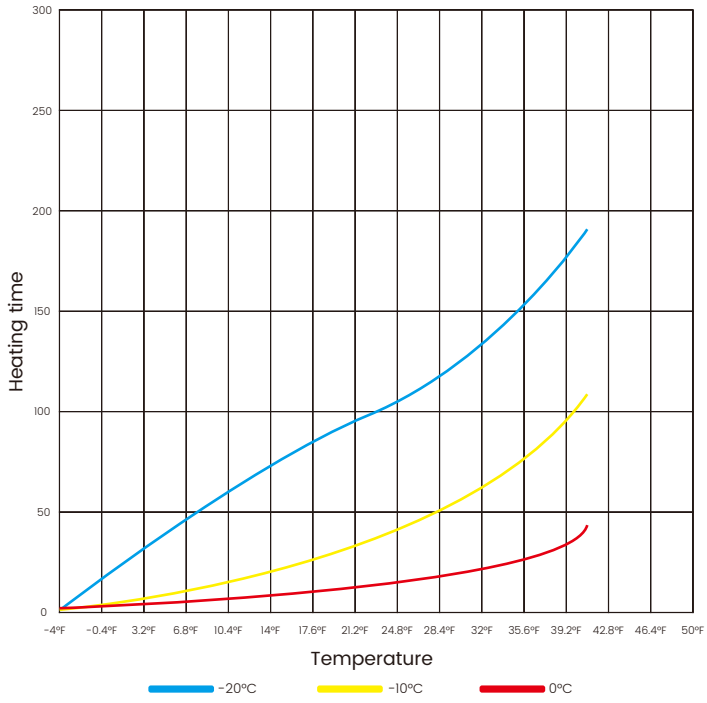


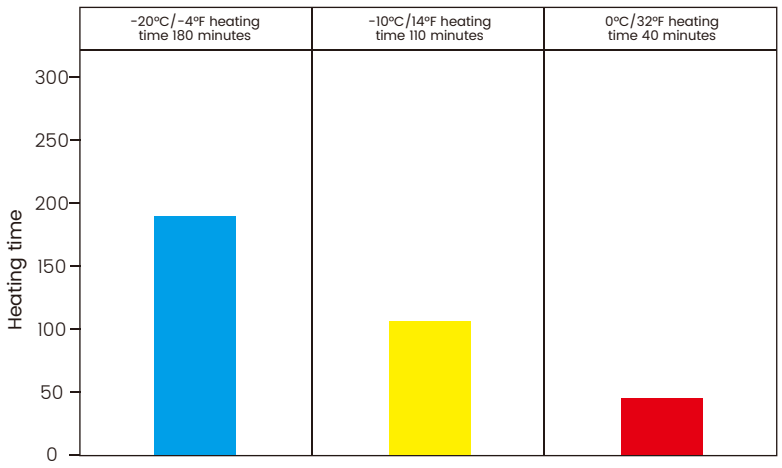
0.5C Cycle curve



PERFORMED OPERATION DATA FOR HEATED BATTERIES

Heating data at different temperatures (charging heating)





Temperature(°C)	Heating time(minute)	Heating off temperature(°C)
-20°C/-4°F	180	5
-10°C/14°F	110	5
0°C/32°F	40	5