



## LFP-Xtreme50

GSS Group series LiFePO<sub>4</sub> (Lipo<sub>4</sub>) battery is a powerful LiFePO<sub>4</sub> battery product, has the highest capacity in a standard casing available on the market.

The highly sophisticated and integrated BMS with very low self consumption, brings safety, functionality and ease of use together in a lightweight and robust casing.

The battery has specially been designed to provide energy for Security Systems, UPS Systems, Backup Power Systems, Solar Systems, Emergency Lighting, ect.

Bluetooth and LED indicators, LCD screen, self-heated functions could be optional.



## Benefits of Lithium Polymer

- High capacity, low weight, Increased energy in given space
- Fast charging
- High operational reliability
- Safest lithium technology
- Excellent long life times
- Built-in intelligent BMS to protect the battery pack at any time and prolong its service life
- Maintenance free

## Certifications and Standards

### a.Products

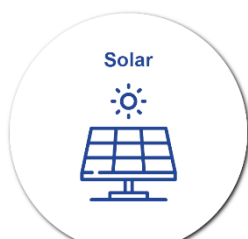
- UL1642(cells)
- FCC
- UN38.3
- IEC62619

### b.MS certifications

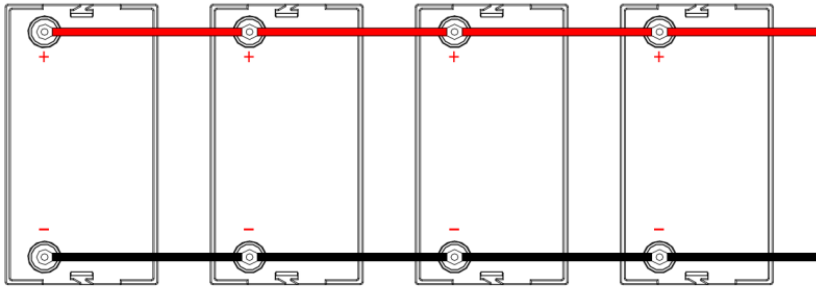
- ISO9001
- ISO14001
- OHSAS 18001

## Specifications

Nominal Characteristic	
Battery Model	LFP-Xtreme 50
Nominal voltage	12.8V
Typical capacity	50Ah(25°C,0.2C)
Typical energy	640Wh
Cells type/chemistry	Prismatic-LiFePO4
Gravimetric Energy density	107Wh/Kg
Dimensions	Length
	Width
	Height
Reference Weight	6Kg
Case Material	ABS
Cycle life	>6000 cycles(80% DoD)
Electric Characteristics	
Charge Method	CC/CV
Charge voltage Range	14.3~14.6V
Max continuous Discharge Current	50A
Max continuous Charge Current	50A
Discharge Pulse Current (10 sec)	100A
End of Discharge Voltage	10V
Operation Environment	
Charge Temperature	0°C~55°C
Discharge Temperature	-20°C~60°C
Storage Temperature	-20°C~60°C
Protection Class	IP56

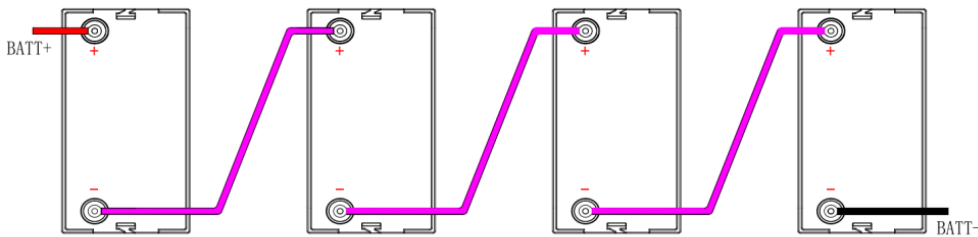


### Parallel Connection of Batteries



Capacity of parallel battery	Battery Numbers	Charge	Discharge
		Limited voltage	Cut-off voltage
12.8V/Capacity*1	1 pcs	14.6 V	10.8 V
12.8V/Capacity*2	2 pcs	14.6 V	10.8 V
12.8V/Capacity*3	3 pcs	14.6 V	10.8 V
12.8V/Capacity*4	4 pcs	14.6 V	10.8 V

### Series Connection of Batteries



Inverter/Charger Type	Battery	Charge	Discharge
		Limited voltage	Cut-off voltage
12V	1 pcs	14.6 V	10.8 V
24V	2 pcs	29.2 V	21.6 V
36 V	3 pcs	43.8 V	32.4 V
48 V	4 pcs	58.4 V	43.2 V

## BMS Specifications

ITEM	CONTENT	CRITERION
Voltage	Charging voltage	3.65V/cell
	Balance voltage	3.45V/cell
Current	Max continues charge current	50A
	Max continues discharge current	50A
Over charge Protection	Over charge detection delay time	1~3S
	Over charge release voltage	3.6±0.05V
	Over discharge detection voltage	3.75±0.05V
Over discharge Protection	Over discharge detection delay time	1~3S
	Over discharge release voltage	2.70±0.10V
	Over discharge detection voltage	2.5±0.05V
Over current protection	Over discharge current protection	175A
	Detection delay time1	50~150mS
	Over charge current detection current	70A
Short Circuit Protection	Detection delay time	300~800mS
	Short circuit protection current	700A, External short circuit
	Detection delay time	400uS
Battery temperature	Release condition	Cut load and charging
	Over-temperature protection	65±5°C
	Release temperature	50±5°C

## Performance Curve

