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Wall Mounted Battery Specifications



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Scope

This specification is applied to the reference battery in this Specification .

Production

Product Name : LiFePO4 Battery Pack

Specification :	E-LFP100-48/51.2	48/51.2V 100Ah (5KWH)
	E-LFP150-48/51.2	48/51.2V 150Ah (7KWH)
	E-LFP200-48/51.2	48/51.2V 200Ah (10KWH)

Standard Deep Cycle 48/51.2V Package Specification



Battery Module		E-LFP100-48	E-LFP150-48	E-LFP200-48	E-LFP100-48	E-LFP150-48	E-LFP200-48
Combination method		15S	15S	15S	16S	16S	16S
Rated Capacity	Typical	100Ah	150Ah	200Ah	100Ah	150Ah	200Ah
	Minimum	100Ah	150Ah	200Ah	100Ah	150Ah	200Ah
Factory Voltage		49.5-50.5V	49.5-50.5V	49.5-50.5V	52.8-53.9V	52.8-53.9V	52.8-53.9V
Voltage at end of Discharge		40-42.5V	40-42.5V	40-42.5V	42.5-45.5V	42.5-45.5V	42.5-45.2V
Charging Voltage		53.2-54V	53.2-54V	53.2-54V	56.8-57.6V	56.8-57.6V	56.8-57.6V
Internal Impedance		≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ
Constant Current Standard charge		20A	30A	40A	20A	30A	40A
Constant Current Standard discharge		20A	30A	40A	20A	30A	40A
Maximum Continuous Charge Current		100A	100A	100A	100A	100A	100A
Maximum Continuous Discharge Current		100A	100A	100A	100A	100A	100A
Operation Temperature Range	Charge:	0~45℃	0~45℃	0~45℃	0~45℃	0~45℃	0~45℃
	Discharge:	-20~55℃	-20~55℃	-20~55℃	-20~55℃	-20~55℃	-20~55℃
Storage Temperature Range		Less than 12 months : -10~35℃		Less than 3 months: -10~45℃		Less than 7 day : -20~65℃	
Volumetric specific energy		100 WH/L	85WH/L	111WH/L	86 WH/L	88WH/L	110WH/L
Gravimetric specific energy		90 WH/KG	84 WH/KG	109 WH/KG	59 WH/KG	89 WH/KG	119WH/KG
Cycle life		≥4000cycle	≥4000cycle	≥4000cycle	≥4000cycle	≥4000cycle	≥4000cycle
Dimensions		480*450*222 mm	480*650*275mm	480*650*275 mm	480*650*275 mm	480*650*275 mm	480*650*275 mm
Weight		53kg	84kg	88kg	59kg	87kg	92.5kg

BMS Specification

- The BMS is designed for 15/16 series lithium battery.
- The BMS have all functions which are :
 - Overcharge detection function
 - Over discharge detection function
 - Over current detection function
 - Short detection function
 - Temperature detection function
 - Balance function
 - Communicate function
 - Alarm function

BMS Parameter

48V 15S / 16S Typical value specifications

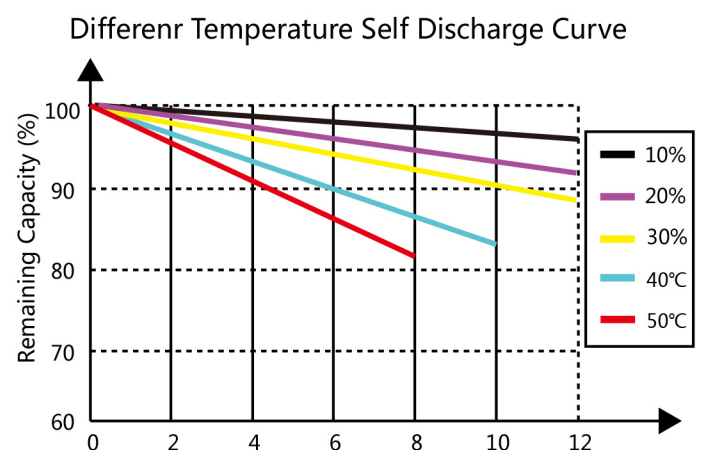
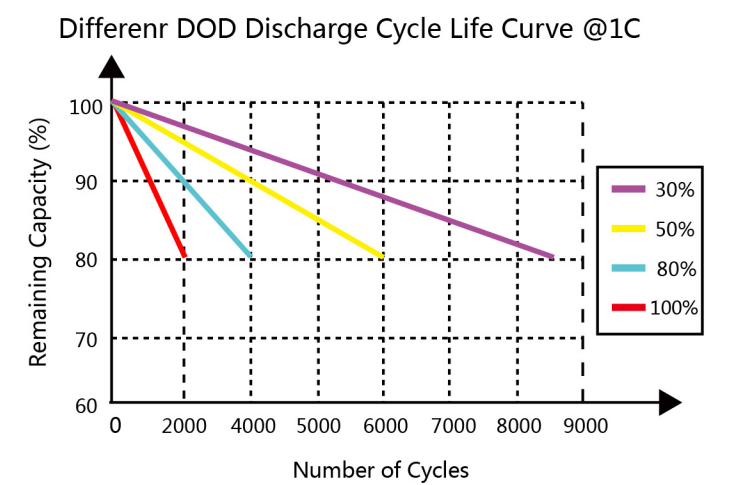
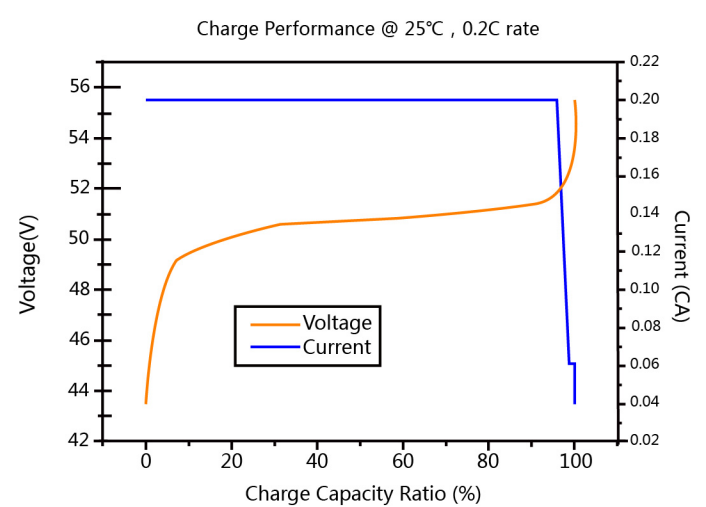
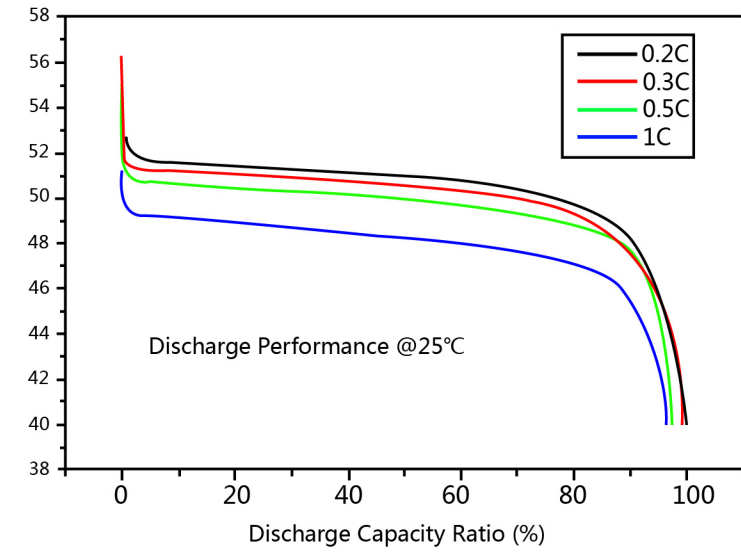
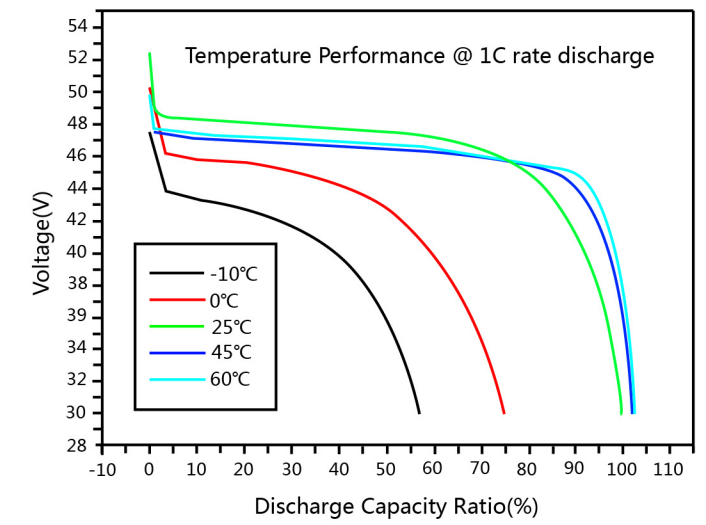
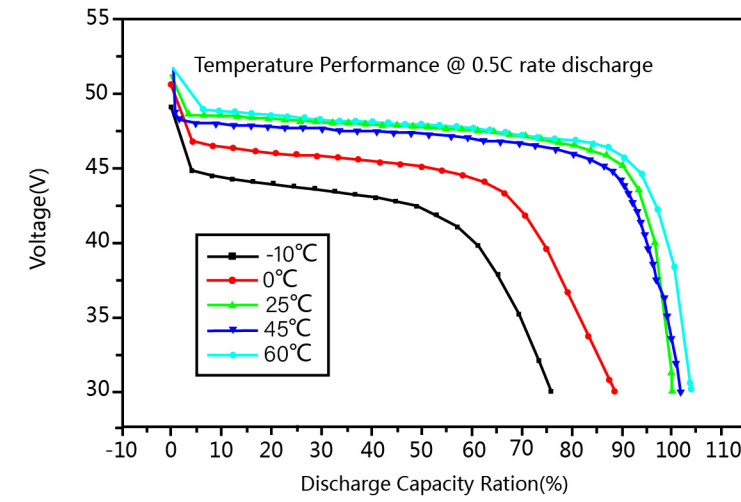
Items	Details	Standard
Cell overcharge protection	Overcharge detection voltage	3.70±0.025V
	Overcharge detection delay time	Typical:1.0s
	Overcharge release voltage	3.45±0.02V
Cell over-discharge protection	Over-discharge detection voltage	2.75±0.02V
	Over-discharge detection delay time	Typical:1.0s
	Over-discharge release voltage	3.05±0.02V or charge release

48V 15S / 16S Typical value specifications

Items	Details	Standard
Over-current protection	discharge Over-current protection current1	120±10A
	discharge Over-current detection delay time 1	1S
	discharge Over-current protection current2	150±10A
	discharge Over-current detection delay time2	3.45±100ms±0.02V
	Charge OC protection current	120±10A
Short protection	Short protection current	350±10A
	Protection condition	Load short
	Detection delay time	≤800us
	Protection release condition	Charging release
Temperature(T) protection	Charge high (T) protection	65±2 C
	Charge high (T) recover	60±5 C
	Discharge high (T) protection	65±2 C
	Discharge high (T) recover	60±5 C
	Charge low (T) protection	-5±2 C
	Charge low (T) recover	0±2 C
	Discharge low (T) protection	-20±5 C
Discharge low (T) recover	-15±5 C	
Balance	Balance threshold voltage	3.45V
Communication	It has RS232 and RS485 standard communication interface, it can real-time monitoring the capacity of battery bank, the voltage, current, environment temperature, and charging/discharging current.	
Alarm	It has over-temperature, over charge, under-voltage, over-current, short circuit alarm function.	



Discharge Curve & Charge Curve



MeritSun is a professional LiFePo4 battery manufacturer since 1999, focus on alternative smart energy storage application. We produce Cells, house made BMS ,module and integrated system solutions. 21 years, we do only one thing, Energy Storage Batteries. We proud of excellency : 100+R&D teams, 1368 employees , 48 fully automatic productions lines ,150,000 square meters factory.

MeritSun's vision is to make Solar ESS Lifepo4 battery accessible to the household people all around the world and help people save energy bills, and save the world from global warming.

MeritSun, The Best Power in the SUN.

