EG4-48100WP LiFePower Battery Manual

OVERVIEW

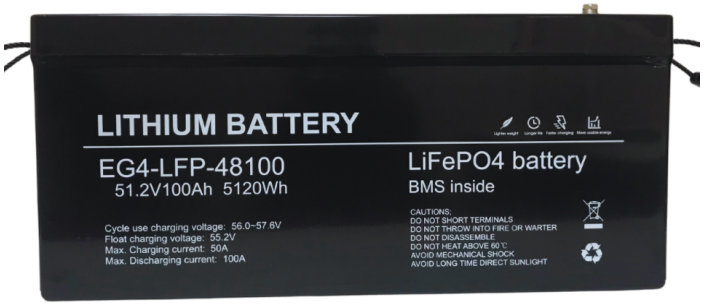
EG4-48100WP is EG4's newest customized 51.2V100Ah Lithium iron phosphate battery module designed for maximum energy storage to fuel power supplies like UPS, Solar Systems, Portable Devices, Boats, and ATV / Golf Cart applications. This battery module is integrated with a 100AH intelligent BMS inside of the IP68 rated waterproof case. The BMS provides advantages on safety, cycle life, energy density, temperature range, and environmental protections.

ADVANTAGES:

This battery consists of prismatic LFP Cells, Wire, BMS, and Container

- Highest Performance LFP Cells with long life, safety features, and a wide temperature range
- Small Size, Light Weight, **High Energy Density**
- Single Cell Container is fire retardant, stable and safe
- Built-In 100AH BMS with voltage, current, temperature, and health management
- Integrated Bluetooth with APP for monitoring
- 10-20 Year Design Life
- Maintenance Free, Waterproof, 5 Year Warranty

PRODUCT IMAGES (48V/100AH):



BATTERY MODULE SPECIFICATIONS:

ITEM		SPEC	DETAIL
NOMINAL	VOLTAGE	51.2V	77˚F, .2˚C
	CAPACITY	100AH	5.12kWh
OPERATING PARAMETERS	CHARGING VOLTAGE REC.	58V	
	DISCHARGE VOLTAGE REC.	43.2V	
	MAXIMUM CHARGE CURRENT	100A constant	
	MAXIMUM DISCHARGE CURRENT	100A constant	30A : RECOMMENDED
	REC. BULK VOLTAGE	57V	
	REC. FLOAT VOLTAGE	56.5V	
	REC. ABSORB VOLTAGE	56.5V	
WEIGHT (LBS)		85 LBS	
DIMENSIONS (W | D | H)		20.4X10.5X8.6in	
TEMP.	CHARGE RANGE	32˚F - 113˚F	
	DISCHARGE RANGE	-4˚F - 131˚F	
	STORAGE RANGE	- 4˚F - 113˚F	
BMS	BUILT IN BATTERY MANAGEMENT SYSTEM	VOLTAGE, CURRENT, TEMPERATURE MANAGEMENT, CELL BALANCE MANAGEMENT, COMMUNICATION VIA BLUETOOTH IOS SMART DEVICE	**EG4** **BLUETOOTH APPLICATION** FOR IOS (FREE)
SERVICE LIFE	DESIGN LIFE	>15 YEARS	
	CYCLE LIFE @ 80% DOD	>7000 TIMES	
WARRANTY		5 YEARS	

BMS SPECIFICATIONS:

BMS provides complete management and protection for your batteries cells. You can expect

- Voltage Warning and Protection for module and each cell
- Current Warning and Protection
- Temperature Warning and Protection (BMS and Cell Sensors)
- Bluetooth Application Monitoring from Smart Device
- Auto Sleep and Operating Mode, Low Consumption

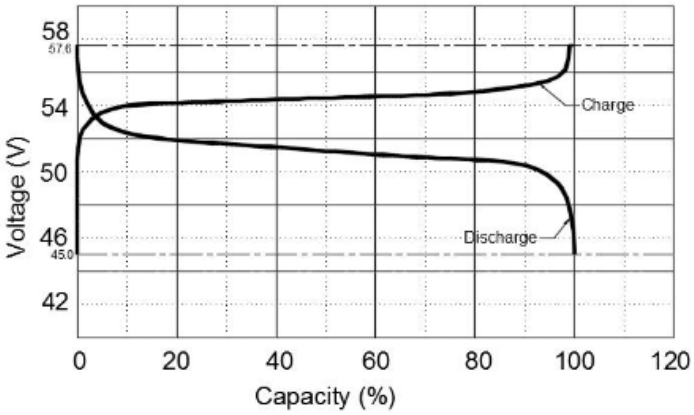
	ITEM	PARAMETERS		DETAIL
CHARGE	CELL VOLTAGE PROTECTION	3.9V	DELAY 1S	RECOVER @ 3.45V
	MODULE VOLTAGE PROTECTION	60V	DELAY 1S	RECOVER @ 55.2V
	OVER CHARGE CURRENT 1	>102A	DELAY 10S	
	OVER CHARGE CURRENT 2	≥120A	DELAY 5S	
	TEMPERATURE PROTECTION	<23˚F or >158˚F	DELAY 1S	RECOVER @ >32 F or <140 F
DISCHARGE	CELL VOLTAGE PROTECTION	2.3V	DELAY 1S	RECOVER @ 3.1V
	MODULE VOLTAGE PROTECTION	43.2V	DELAY 1S	RECOVER @ 48V
	OVER CHARGE CURRENT 1	>102A	DELAY 10S	RECOVER IN 60S
	OVER CHARGE CURRENT 2	>150A	DELAY 5S	RECOVER IN 60S
	TEMPERATURE PROTECTION	<32˚F or >158˚F	DELAY 1S	
	SHORT CIRCUT	>250A	DELAY .1MS	
BMS SPECS	PCB TEMP PROTECTION	>221 F	DELAY 1S	RECOVER @ <176 F
	CELL BALANCE	100mA	PASSIVE BALANCE	CELL V DIFFERENCE >40mV
	TEMPERATURE ACCURACY	3%	CYCLE MEASURE	-40 F - 212 F RANGE
	VOLTAGE ACCURACY	0.5%	CYCLE MEASURE	FOR CELLS AND MODULE
	CURRENT ACCURACY	3%	CYCLE MEASURE	-200 ~ + 200mV RANGE
	POWER CONSUMPTION WITH DIFFERENT CONDITIONS	<300uA	DELAY 1S	STORAGE & TRANSPORTATION
		<300uA	SLEEP	PROTECTION AND STANDBY
		<40mA	OPERATING	CHARGING & DISCHARGING
	STATE OF CHARGE	5%		INTERNAL CALCULATIONS
	COMMUNICATION	**BLUETOOTH** - EG4 APP IOS AND ANDRIOD SMART DEVICE		

EG4 BLUETOOTH APPLICATION DOWNLOAD:

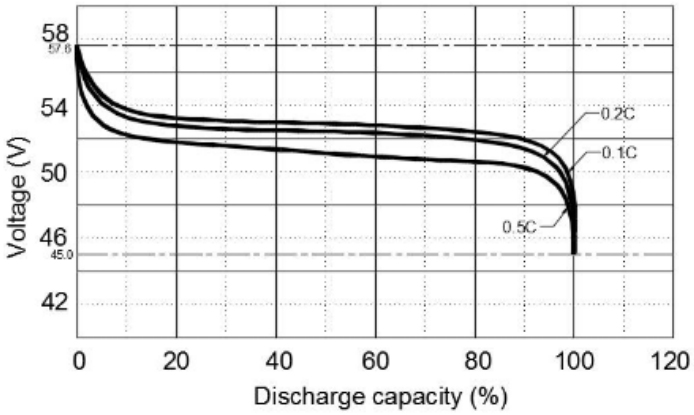
Currently only available on IOS
Google PlayStore Coming Soon

BATTERY MODULE PERFORMANCE CURVE:

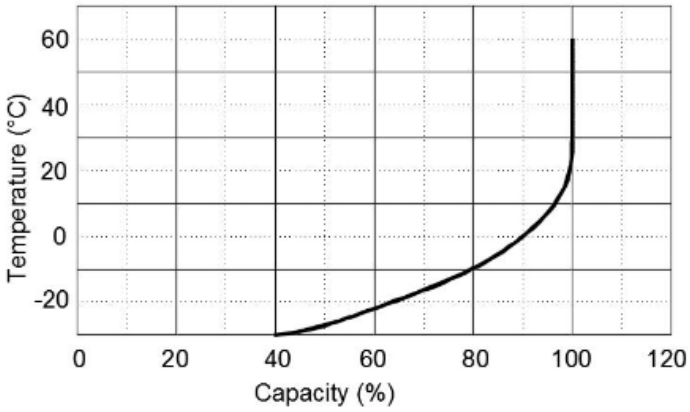
Charge & Discharge curve with 0.5C @ 25°C



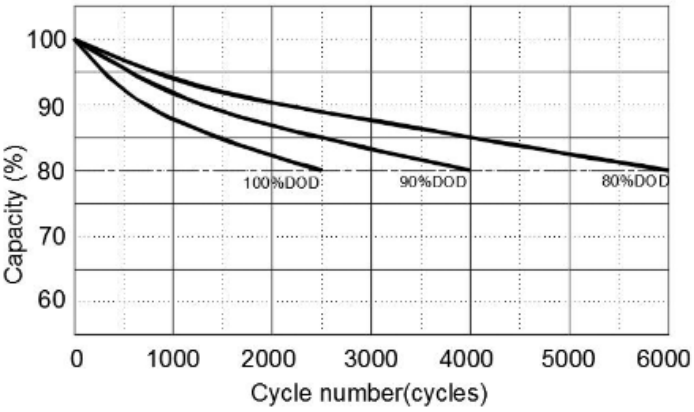
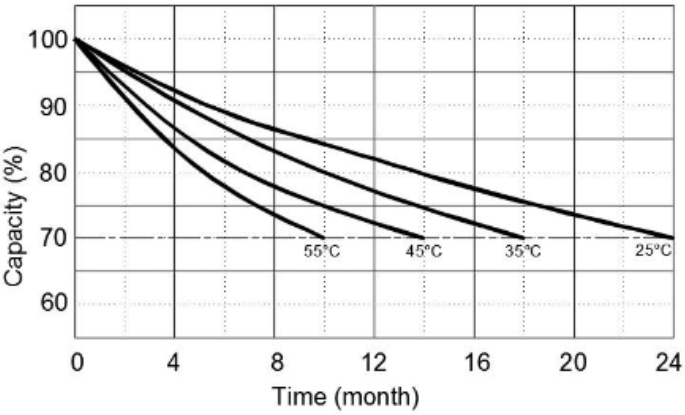
Discharge perfomance with different rate @ 25°C



Discharge capacity with different temperature @ 0.5C



Cycle life with DOD @ 0.5C，25°C



Self-discharge @ different temperature