

EG4-LFP-12100 LiFePower Waterproof Battery Manual

OVERVIEW

EG4-LFP-12100 is EG4's newest customized 12.8V100Ah Lithium iron phosphate battery module designed for maximum energy storage power supply system application. 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.

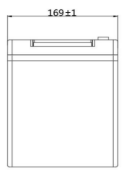
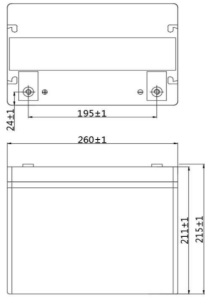
ADVANTAGES:

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 (12V/100AH):

12V/100AH EG4-WP WATERPROOF + BLUETOOTH



BATTERY MODULE SPECIFICATIONS:

12V BATTERY SPECIFICATIONS			
ITEM		SPECIFICATION	
NOMINAL	VOLTAGE	12.8V	
	CAPACITY	100AH	
WEIGHT (LBS)		22 LBS	
DIMENSIONS (W"/D"/H")		10.2 X 6.6 X 8.2 IN	
OPERATING PARAMETERS	CHARGING VOLTAGE	10V - 14.4V	
	DISCHARGE VOLTAGE	12V	
	REC. CHARGE CURRENT	30A	
	DISCHARGE CURRENT	MAX CONSTANT 100A	
TEMPERATURE	CHARGE RATE	32 - 113°F	
	DISCHARGE RATE	-4 - 131°F	
	STORAGE RANGE	-4 - 113°F	
BMS	BUILT IN BATTERY MANAGEMENT SYSTEM	VOLTAGE, CURRENT, TEMPERATURE MANAGEMENT AND CELL BALANCE	
SERVICE LIFE	DESIGN LIFE	10-20+ YEARS	
	CYCLE LIFE @80% DOD	>7000 TIMES	
BATTERY PARAMETERS			
ITEM		PARAMETERS	
CHARGE	CELL VOLTAGE PROTECTION	3.9V	DELAY 1s
	MODULE VOLTAGE PROTECTION	15.2V	DELAY 1s
	OVER CHARGE CURRENT 1	>100A	DELAY 10s
	OVER CHARGE CURRENT 2	≥120A	DELAY 3s
	TEMPERATURE PROTECTION	<32°F or >158°F	DELAY 1s
DISCHARGE	CELL VOLTAGE PROTECTION	2V	DELAY 1s
	MODULE VOLTAGE PROTECTION	9.6V	DELAY 1s
	OVER CHARGE CURRENT 1	>100A	DELAY 10s
	OVER CHARGE CURRENT 2	>150A	DELAY 3s
	TEMPERATURE PROTECTION	<-4°F or >167°F	DELAY 1s

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

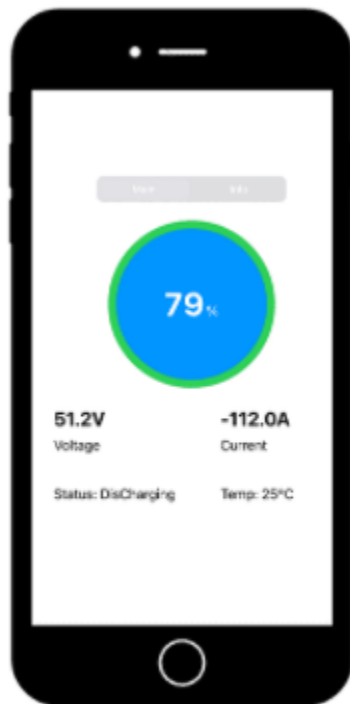
Item		Specification	Conditions
Nominal	Voltage	12.8V	25°C,0.2C
	Capacity	100Ah	
Module weight		11.5kg	±0.3kg
Dimensions(W*D*H), mm		260*169*215	±2mm
Operating parameters	Charging Voltage	14.0V~14.4V	
	Discharging Voltage	9.6V	
	Charging current	Max constant charge: 100A	Recommended 30A
	Discharging current	Max constant discharge: 100A	
Temperature	Charge range	0°C~50°C	
	Discharge range	-20°C~55°C	
	Storage range	-20°C~55°C	
BMS	Built-in BMS	Voltage, current, temperature management & cell balance	Bluetooth Monitoring
Service life	Design life	>15years	25°C
	Cycle life	>4000 times, 0.5C, 80%DOD	

► BMS parameters.

Item		Parameters		Condition
Charge	Cell voltage protection	3.9V	Delay 1s	Recovery at 3.45V
	Module voltage protection	15.2V	Delay 1s	Recovery at 14.4V
	Over charging current 1	>105A	Delay 10s	
	Over charging current 2	≥120A	Delay 3s	
	Temperature protection	<0°C or >70°C	Delay 1s	Recover when >5°C or <60°C
Discharge	Cell voltage protection	2.0V	Delay 1s	Recovery at 3.1V
	Module voltage protection	9.6V	Delay 1s	Recovery at 12V
	Over discharging current 1	> 110A	Delay 10s	Recovery in 60s
	Over discharging current 2	> 200A	Delay 3s	Recovery in 60s
	Short circuit	>775A	< 0.1mS	
	Temperature protection	<-20°C or >75°C	Delay 1s	Recover when >-10°C or <65°C
BMS	PCB Temp protection	>95°C	Delay 1s	Recover when <75°C
	Cell balance	100mA	Passive balance	Cell voltage difference > 40mV
	Temperature accuracy	3%	Cycle measurement	Measuring range -40~100°C
	Voltage accuracy	0.5%	Cycle measurement	For cells and module
	Current accuracy	3%	Cycle measurement	Measuring range -200~+200
	SOC	5%		Integral calculation
	Power consumption with different condition	<300uA	Sleep mode	Protection & stand-by
		<10mA	Operating mode	Charging & discharging
Communication	Bluetooth		Customized EG4 APP	

EG4 BLUETOOTH APPLICATION DOWNLOAD:

Currently only available on IOS
Google PlayStore Coming Soon



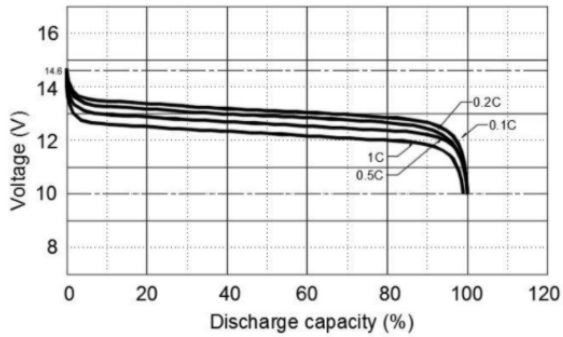
**LOOK FOR EG4
IN APP STORE**



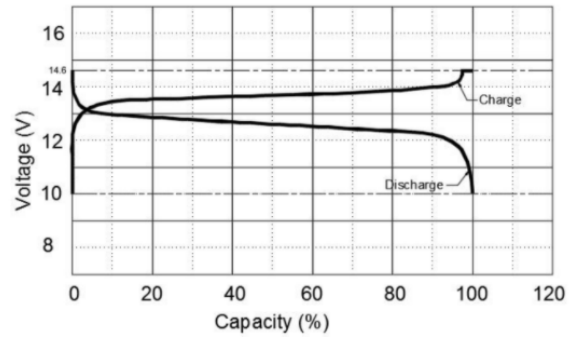
SCAN TO DOWNLOAD

BATTERY MODULE PERFORMANCE CURVE:

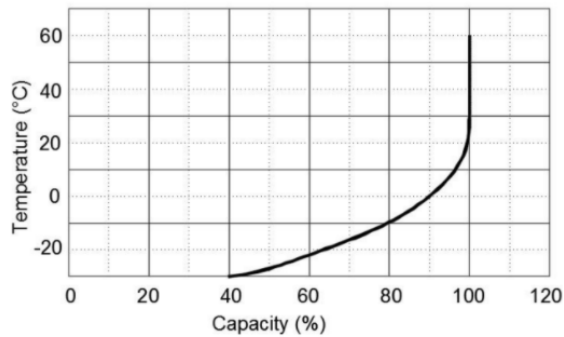
Discharge performance with different rate @ 25°C



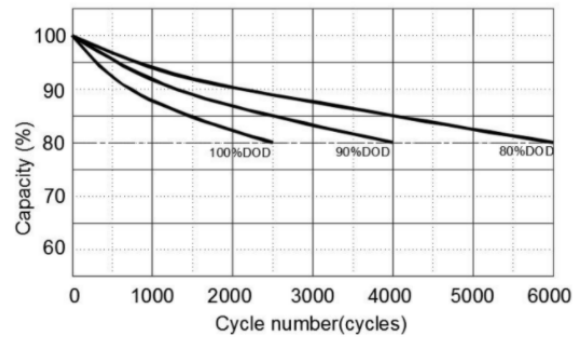
Charge & Discharge curve with 0.5C @ 25°C



Discharge capacity with different temperature @ 0.5C



Cycle life with DOD @ 0.5C, 25°C



Self-discharge @ different temperature

