

EG4-WP Waterproof Lithium Battery | 12V 100Ah

Manual

OVERVIEW

EG4-LFP-12 100 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.

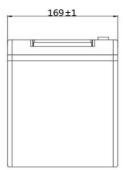
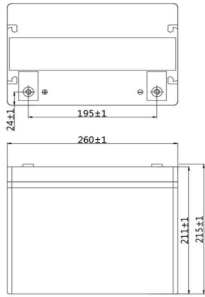
ADVANTAGES:

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:

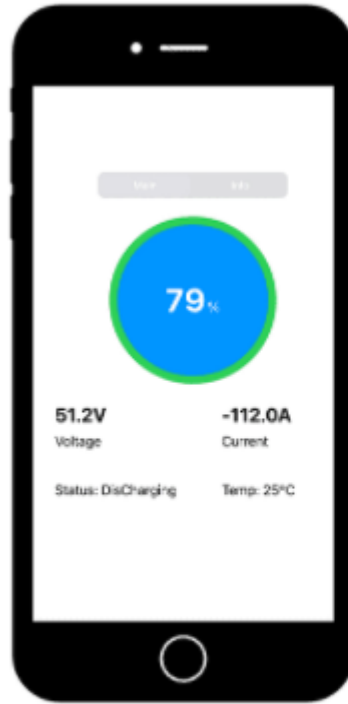
BMS provides complete management and protection for your batteries cells. You can expect

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*168*211	±2mm
Operating parameters	Charging Voltage	14.0V~14.4V	
	End-off 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	>6000 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:



SCAN TO DOWNLOAD

Download the app using the QR codes here. (You may need to enable "Allow install from unknown sources" on Android devices.)



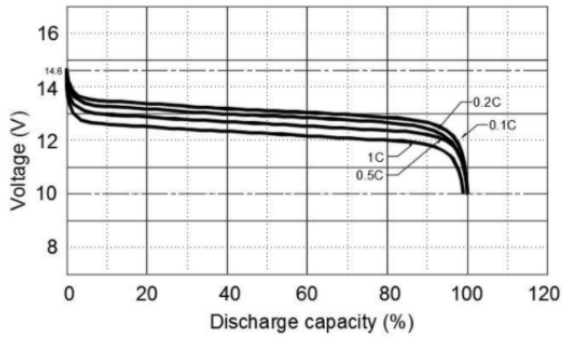
iOS App



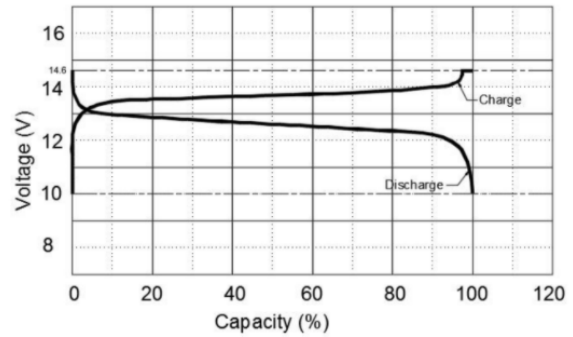
Android App

BATTERY MODULE PERFORMANCE CURVE:

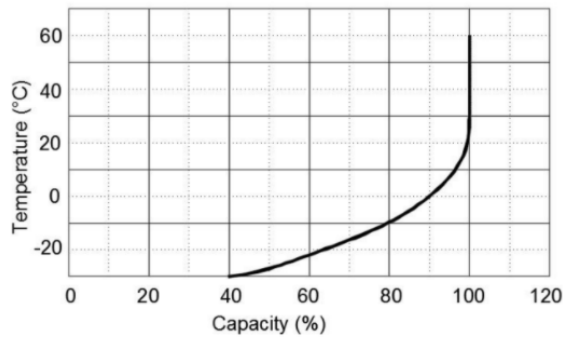
Discharge performance with different rate @ 25°C



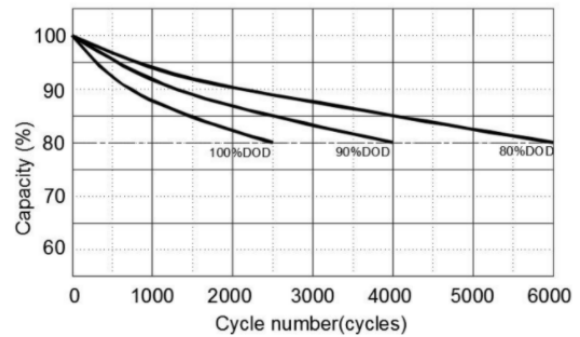
Charge & Discharge curve with 0.5C @ 25°C



Discharge capacity with different temperature @ 0.5C



Cycle life with DOD @ 0.5C, 25°C



Self-discharge @ different temperature

