

# Lithium Iron Phosphate (LiFePO4) Battery LFeLi-1220M (12.8V21Ah)

# Features Of LiFePO4 Battery

**Longer Cycle Life**: Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.

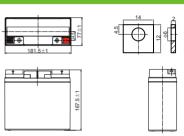
**Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement for lead acid batteries.

**Higher Power**: Delivers twice power of lead acid battery, even high discharge rate, while maintaining high energy capacity.

Wider Temperature Range: -20°C~60°C.

**Superior Safety**: Lithium Iron Phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation.







# Typical Applications

- Wheelchairs and scooters
- Solar/wind energy storage
- Back-up power for small UPS
- Golf trolleys & buggies
- Electric bikes
- Tools

# **Specification**

	Nominal Voltage	12.8V
	Nominal Capacity	21Ah
	Energy	268.8Wh
Electrical	Internal Resistance(AC)	≤50mΩ
Characteristics	Cycle Life	>2000 cycles @1C 100%DOD
	Months Self Discharge	<3%
	Efficiency of Charge	100% @0.5C
	Efficiency of Discharge	96~99% @1C
Standard Charge	Charge Voltage	14.6±0.2V
	Charge Mode	0.2C to 14.6V, then 14.6V, charge current to 0.02C (CC/CV)
	Charge Current	10A
	Max. Charge Current	20A
	Charge Cut-off Voltage	15.6V±0.2V
Standard Discharge	Continuous Current	40A
	Max. Pulse Current	50A(<3s)
	Discharge Cut-off Voltage	8V
Environmental	Charge Temperature	0 $^{\circ}\mathrm{C}$ to 55 $^{\circ}\mathrm{C}$ (32F to 131F) $@60\pm25\%$ Relative Humidity
	Discharge Temperature	-20 °C to 60 °C (-4F to 140F) @60±25% Relative Humidity
	Storage Temperature	$^-$ 20 $^\circ$ C to 45 $^\circ$ C (-4F to 113F) $^\circ$ @60 $\pm$ 25% Relative Humidity
	IP Class	IP65
Mechanical	Plastic Case	ABS
	Approx. Dimensions	181.5mm*77mm*167.5mm (7.15in.*3.03in.*6.59in.)
	Approx. Weight	3.00kg (6.61lbs)
	Terminal	Т3

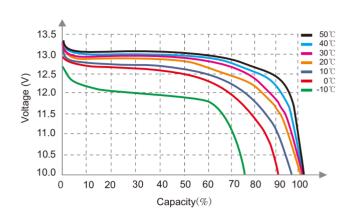


# **Lithium Iron Phosphate (LiFeP04) Battery**

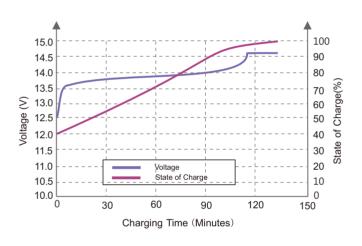
# Different Rate Discharge Curve(25℃)

### 14.0 0.1C 0.2C 0.5C 1C 2C 13.2 Voltage (V) 12.4 11.6 10.0 0.10 0.2C 9.2 10h 20min 40min 60min 2h 5h Discharge Time

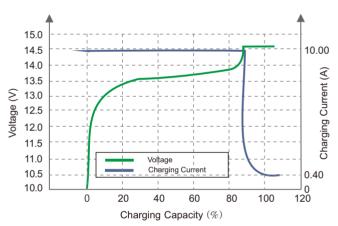
# Different Temperature Discharge Curve(0.5C)



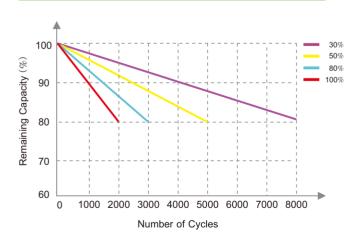
# State of Charge Curve(0.5C, 25°C)



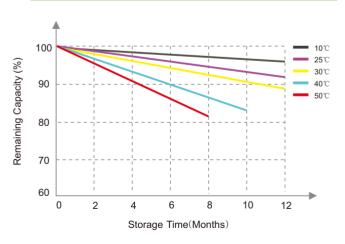
### Charging Characteristics (0.5C, 25°C)



# **Different DOD Discharge Cycle Life Curve(1C)**



# **Different Temperature Self Discharge Curve**



Publication No:LB-LFeLi-1220M-PD-EN-V2.0-201803

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