

# Lithium Iron Phosphate (LiFePO4) Battery LFeLi-1220M (12.8V20Ah)

# 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.

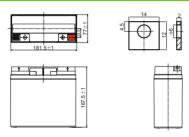
**Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement for lead acid batteries.

**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.

# **Physical Dimension-mm**





# **Typical Applications**

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

## **Specification**

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Electrical Characteristics	Nominal Voltage	12.8V
	Nominal Capacity	20Ah
	Energy	256Wh
	Internal Resistance(AC)	≤20mΩ
	Cycle Life	>3000 cycles @0.5C 80%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	14.6V±0.2V
Standard Discharge	Rated Discharge Current	10A
	Max. Discharge Current	20A
	Discharge Cut-off Voltage	10V
Environmental	Charge Temperature	0 $^{\circ}$ C to 55 $^{\circ}$ C (32F to 131F) $@60\pm25\%$ Relative Humidity
	Discharge Temperature	−20 $^{\circ}$ C to 60 $^{\circ}$ C (−4F to 140F) $@60\pm25\%$ Relative Humidity
	Storage Temperature	−20 $^{\circ}$ C to 45 $^{\circ}$ C (-4F to 113F) $@60\pm25\%$ Relative Humidity
	IP Class	IP65
Mechanical	Plastic Case	ABS
	Approx. Dimensions	181.5mm*77mm*167.5mm (7.15in.*3.03in.*6.59in.)
	Approx. Weight	2.60kg (5.73lbs)
	Terminal	T3

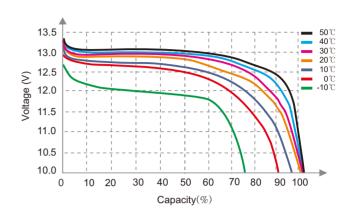


# **Lithium Iron Phosphate (LiFePO4) Battery**

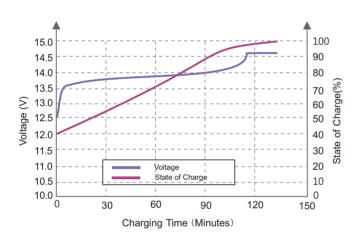
### Different Rate Discharge Curve(25℃)

#### 14.0 0.1C 0.2C 0.5C 1C 13.2 Voltage (V) 12.4 11.6 10.8 10.0 0.10 9.2 0 20min 60min 2h 5h 10h Discharge Time

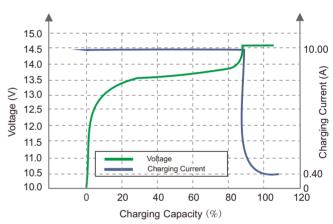
### **Different Temperature Discharge Curve(0.5C)**



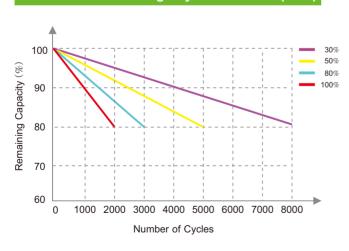
## State of Charge Curve(0.5C, 25°C)



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

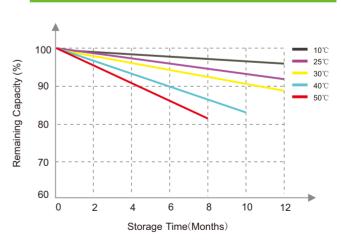


## Different DOD Discharge Cycle Life Curve(0.5C)



Power Storage Deutschland GmbH

## **Different Temperature Self Discharge Curve**



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