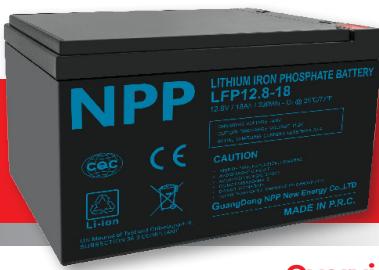


# LFP12.8-18

Lithium iron phosphate battery



## LITHIUM SERIES

### Characteristics

#### Electrical

Nominal voltage	12.8V	
Nominal capacity at 5 hours rate (25°C)	18Ah	
Energy	230Wh	
Charge Efficiency at 0.2C (25°C)	99.5%	
Discharge Efficiency at 1C (25°C)	96-99%	
Approx. internal resistance (25°C)	≤150.0 mΩ	
Cycle life / 0.2C 100% D.O.D	>3000 cycles	
Capacity affected by temperature	40°C	101%
	25°C	100%
	0°C	90%
	-10°C	75%

#### Mechanical

Dimensions	Length	151±1.5mm (5.94inch)
	Width	98±1mm (3.86inch)
	Height	93±1mm (3.66inch)
	Total height	98±1mm (3.86inch)
Terminal type	Custom	
Torque	3.0±0.6N.m	
Weight	2.50kg (5.51lbs)±4%	
Water & Dust resistance	IP65	
Battery container ABS UL94-HB	V-0 optional	
Cell strings	4 strings	

#### Temperature

Nominal operating temperature	25°C±3 (77±5°F)	
Operating temperature range	Discharge	-20°C~60°C (-4°F~140°F)
	Charge	0°C~45°C (32°F~113°F)
	Storage	0°C~40°C (32°F~104°F)

#### Charging

Charging voltage at 25°C	14.6V
Standard charge mode (25°C±2°C, <75%RH)	0.2CA Constant Current to 14.6V, then Constant Voltage 14.6V until the current drops to 0.02CA. Rest 30 minutes, before use.
Nominal charging current	3.6A
Maximum charging current	9A
Charging cut-off voltage	14.6V

#### Discharging

Continuous discharge current	20A
Maximum pulse discharge current (<100ms)	60A
Discharge cut-off voltage	11.2V
Self discharge rate (25°C)	≤3%/month

#### Communication & connection

Communication protocol (optional)	N/A
SOC (optional)	Bluetooth
Maximum modules in parallel or series	4 in string, 5 in parallel

The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact NPP Power for the latest available version.

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### Overview

NPP Power Lithium-Iron Phosphate batteries offer superb improvement in characteristics compared to lead-acid technology. Due to the extreme cycle and calendar life, LiFePO4 batteries are an excellent long-term investment for your applications. Powerful, lightweight, safe, and smart, the Lithium-Iron Phosphate batteries are the future of the energy storage you can have right now.

### Features

**Longer cycle life** - Up to 15 times longer cycle life and 5 times longer float/calendar life than lead-acid batteries.

**More capacity** - Provides up to 100% of usable energy.

**Lightweight** - 60% lighter than lead-acid batteries.

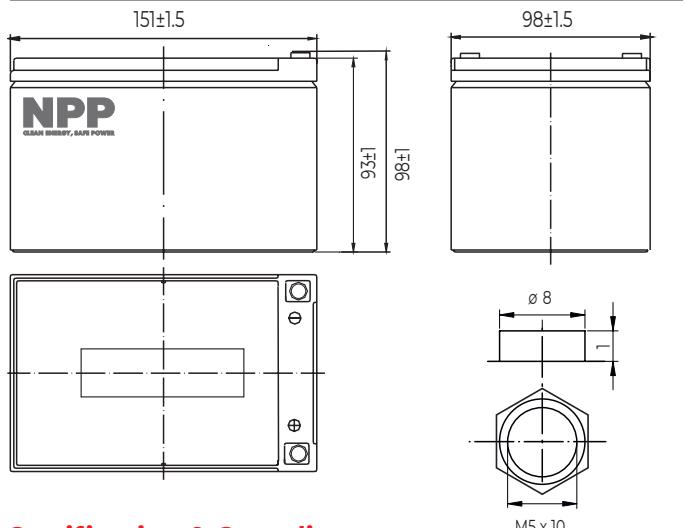
**High discharge rate** - Ability to fully discharge the battery at a high rate of discharge.

**Fast charging** - Charges much faster than conventional sealed lead-acid batteries.

**Long cycle life** - More than 3000 cycles at 100% depth of discharge.

**Intelligent BMS** - The battery management system monitors and adapts to battery conditions to maximize performance and safety.

### Dimensions & Terminal Type (mm)



### Certification & Compliances

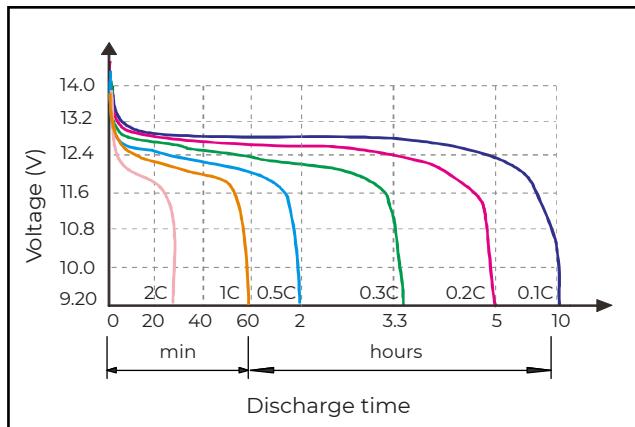


Compliant to: IEC 62133-2

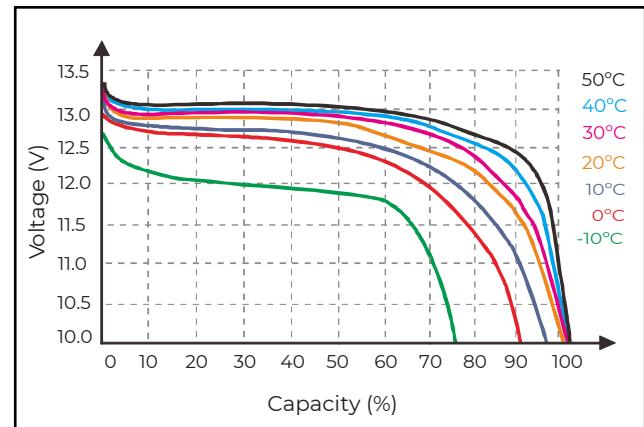
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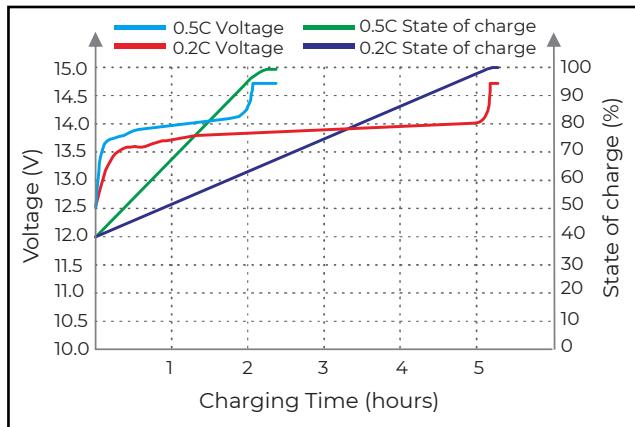
### Discharge characteristics (25°C)



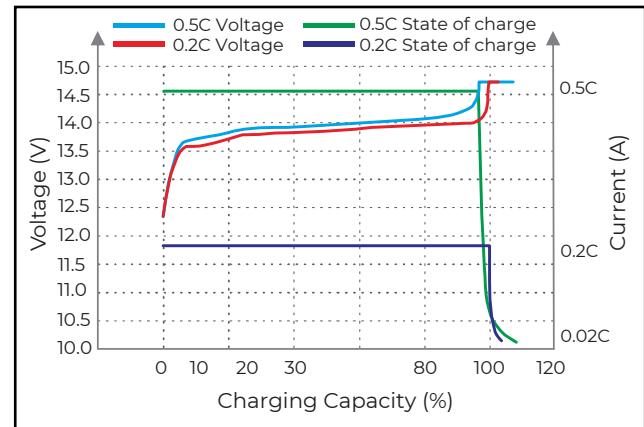
### Temperature effects on discharge (0.5C)



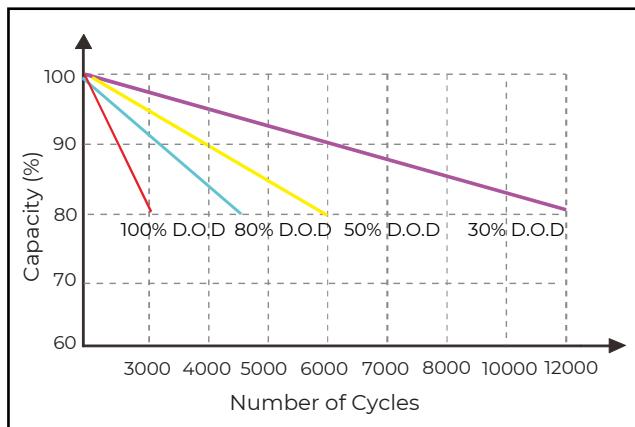
### Charging Time on S.O.C. (25°C)



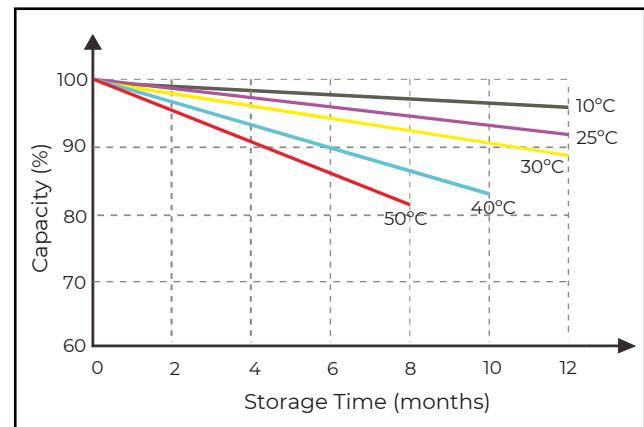
### Charge characteristics (25°C)



### Cycle life on D.O.D. (25°C)



### Self discharge characteristics



D.O.D. - depth of discharge  
S.O.C. - state of charge