

LFP12.8-100

Lithium iron phosphate battery



LITHIUM SERIES

Characteristics

Electrical

Nominal voltage	12.8V
Nominal capacity at 5 hours rate (25°C)	100Ah
Energy	1280Wh
Charge Efficiency at 0.2C (25°C)	99.5%
Discharge Efficiency at 1C (25°C)	96-99%
Approx. internal resistance (25°C)	≤14.0 mΩ
Cycle life / 0.2C 100% D.O.D	>3000 cycles

Mechanical

Dimensions	Length	260±2mm (10.24inch)
	Width	168±2mm (6.61inch)
	Height	209±2mm (8.23inch)
	Total height	217±2mm (8.54inch)
Terminal type	T16	
Torque	2.3±2.5N.m	
Weight	10.8kg (23.81lbs)±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	20A
Maximum charging current	50A
Charging cut-off voltage	14.6V

Discharging

Continuous discharge current	100A
Maximum pulse discharge current (<100ms)	300A
Discharge cut-off voltage	11.2V
Self discharge rate (25°C)	≤3%/month

Communication & connection

Communication protocol (optional)	RS485 (standard none)
SOC (optional)	Bluetooth/Heating
Maximum modules in parallel or series	4 in string, 5 in parallel

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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.

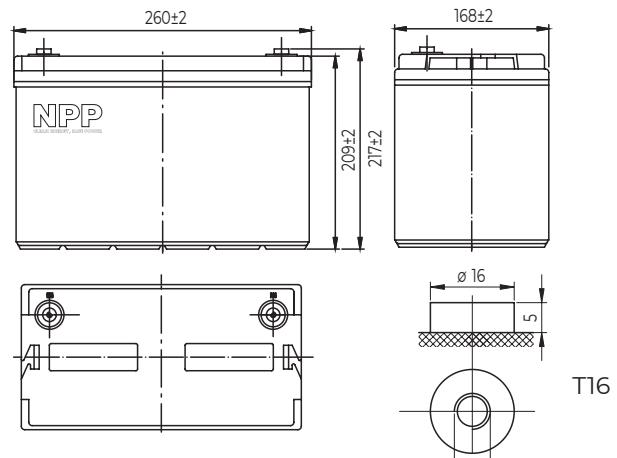
High discharge rate - Ability to fully discharge the battery at a high rate of discharge.

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



UN38.3

Compliant to: IEC 62133-2

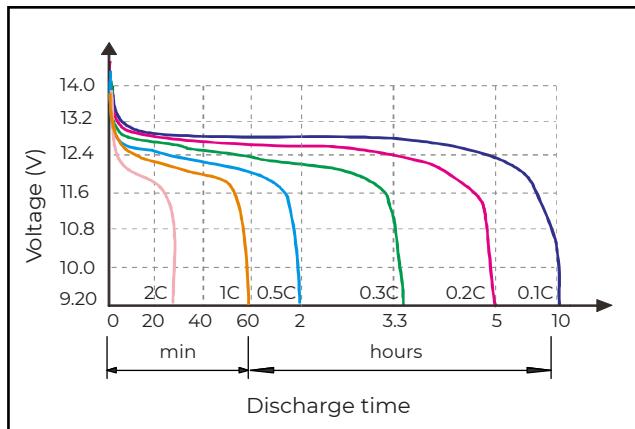
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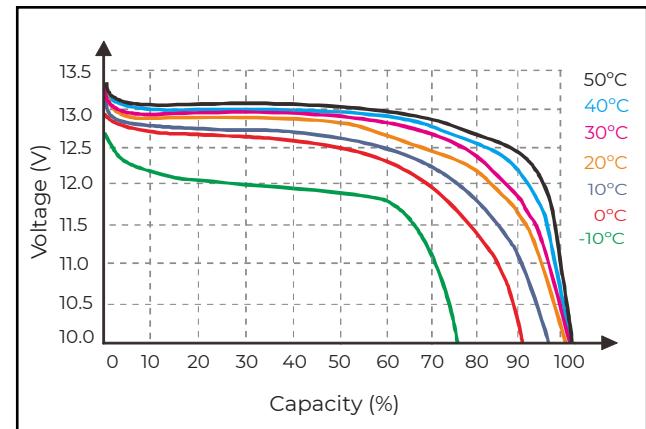
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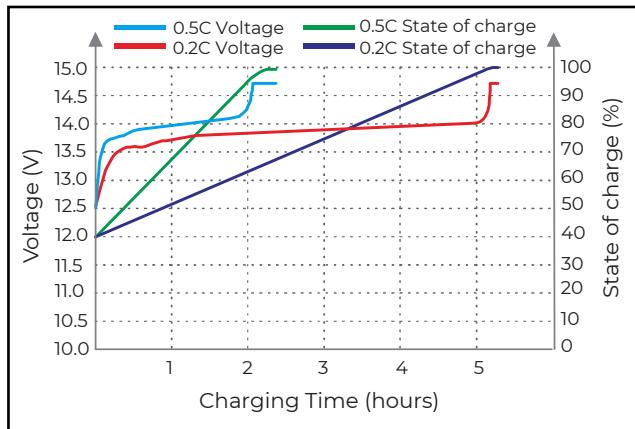
Discharge characteristics (25°C)



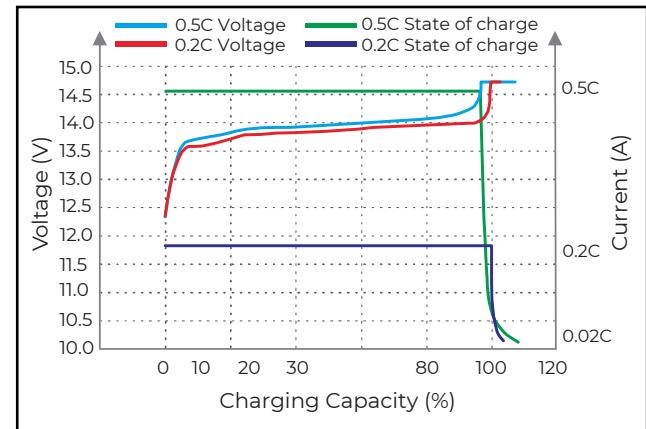
Temperature effects on discharge (0.5C)



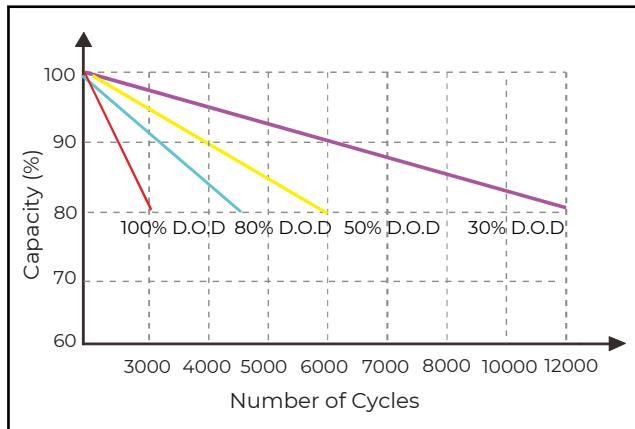
Charging Time on S.O.C. (25°C)



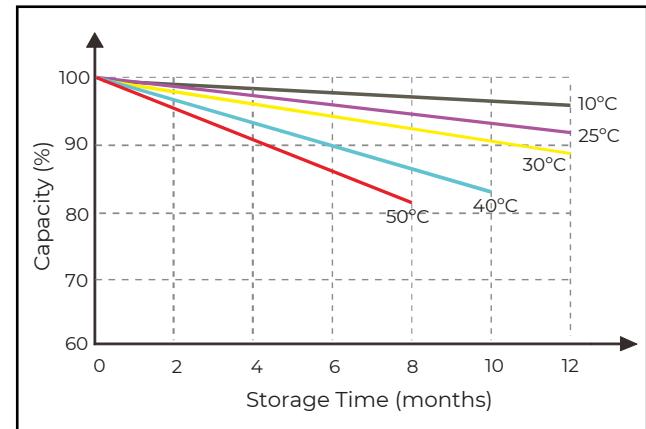
Charge characteristics (25°C)



Cycle life on D.O.D. (25°C)



Self discharge characteristics



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