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NPP
CLEAN ENERGY, SAFE POWER

Extreme Cycle | Li3 LiFePO4 | UPS | Solar & Wind | EV | Mobility

LFP12.8-24

Lithium iron phosphate battery

LITHIUM SERIES

Characteristics

Electrical		
Nominal voltage		12.8V
Nominal capacity at 5 hours rate (25°C)		24Ah
Energy		307Wh
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		>2000 cycles
Capacity affected by temperature	40°C	101%
	25°C	100%
	0°C	90%
	-10°C	75%
Mechanical		
Dimensions	Length	181±1.5mm (7.13inch)
	Width	77±1mm (3.03inch)
	Height	168±1mm (6.61inch)
	Total height	168±1mm (6.61inch)
Terminal type		T12
Torque		3.0±0.6N.m
Weight		2.90kg (6.39lbs)±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		4.8A
Maximum charging current		12A
Charging cut-off voltage		14.6V
Discharging		
Continuous discharge current		30A
Maximum pulse discharge current (<100ms)		70A
Discharge cut-off voltage		11.2V
Self discharge rate (25°C)		≤3%/month
Comunication & connection		
Communication protocol (optional)		N/A
SOC (optional)		LED/Bluetooth
Maximum modules in paralel or series		4 in string, 6 in parallel

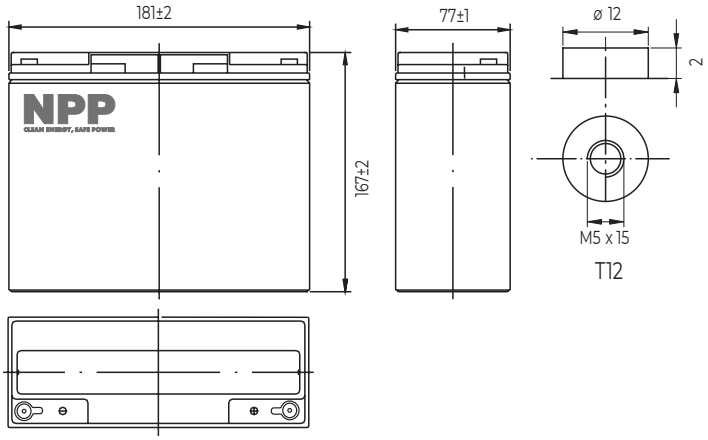
Overview

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

ISO 9001 | ISO 14001 | ISO 45001 | CE | CQC | UN38.3

Compliant to: IEC 62133-2

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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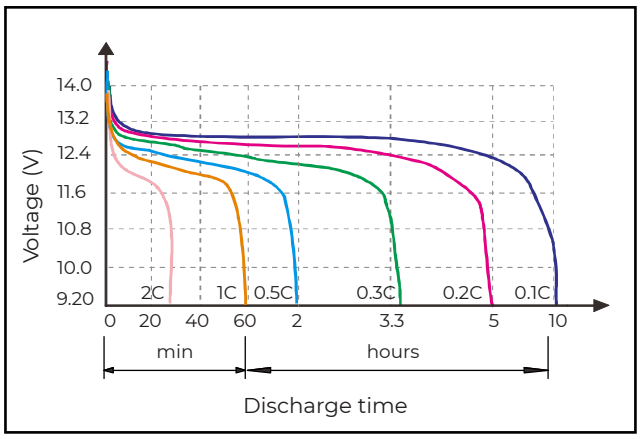
Rev. 211122-KK

LFP12.8-24

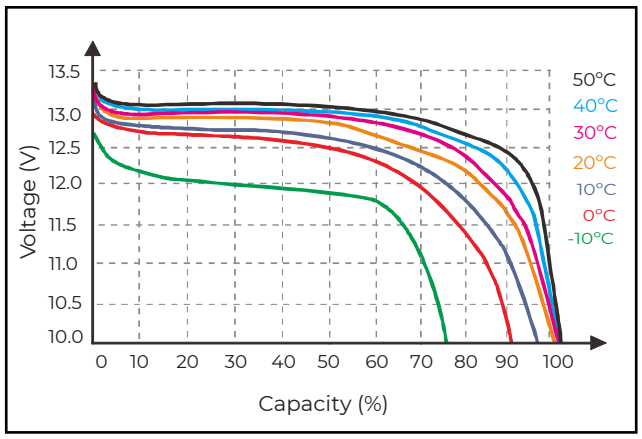
Lithium iron phosphate battery

LITHIUM
SERIES

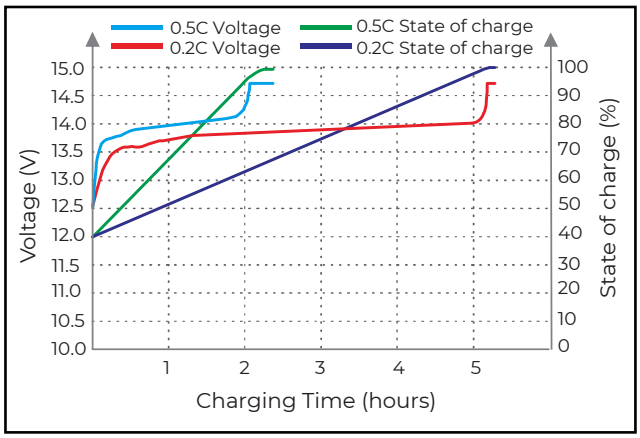
Discharge characteristics (25°C)



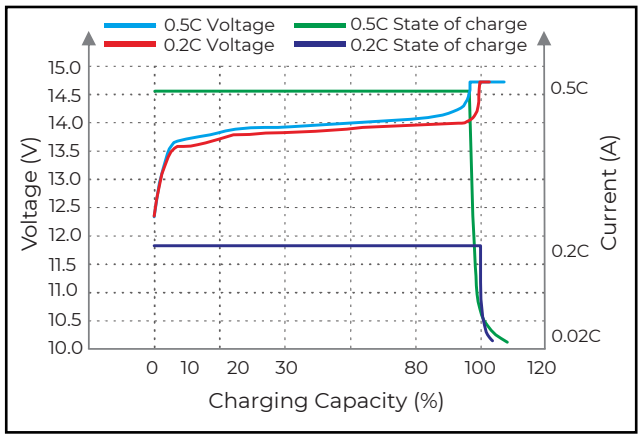
Temperature effects on discharge (0.5C)



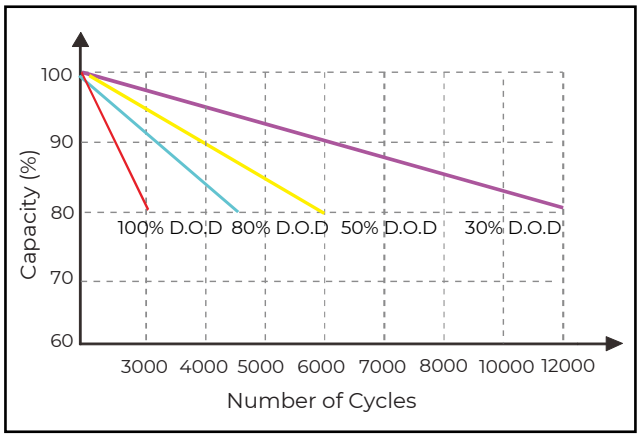
Charging Time on S.O.C. (25°C)



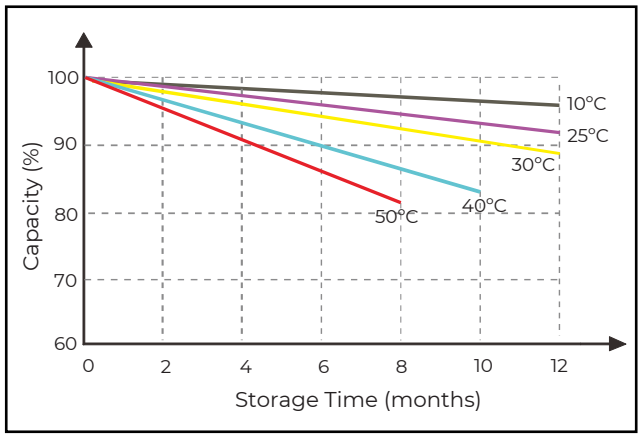
Charge characteristics (25°C)



Cycle life on D.O.D. (25°C)



Self discharge characteristics



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