

NSFD018Q11 12V18Ah

LiFePO₄ Lithium Battery

Longer Cycle Life: Offers up to 15 times longer cycle life and 5 times longer float/calendar life than lead acid battery.

Lighter Weight: About 40% weight of a comparable lead acid battery, save up to 60% in weight.

Quick Charge: Short charge time compared with lead acid battery.

Low Self-Discharge: Lower self-discharge compared with lead acid battery, longer storage time without recharging.

Superior Safety: Multi-protection methods built inside to protect the battery from overcharge, over discharge and short circuit situation.

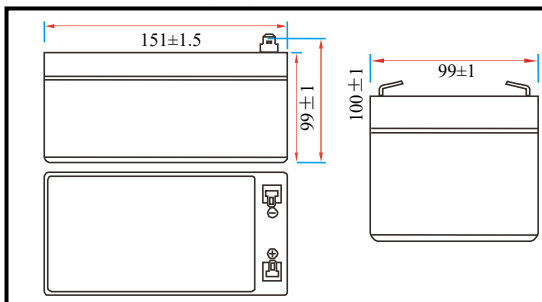
High Efficient: Higher round-trip energy efficiency of the average (92%) than lead acid battery 80% (discharge from 100% to 0% and back to 100% charged).



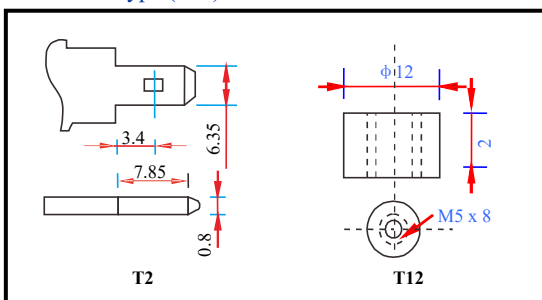
Specifications

Nominal voltage		12V
Nominal capacity		18Ah
Dimensions	Length	151±1.5mm (5.94inch)
	Width	99±1mm (3.89inch)
	Height	99±1mm (3.89inch)
	Total height	100±1mm (3.94inch)
Approx. weight		2.09kg (4.63lbs)±4%

Outer dimensions (mm)



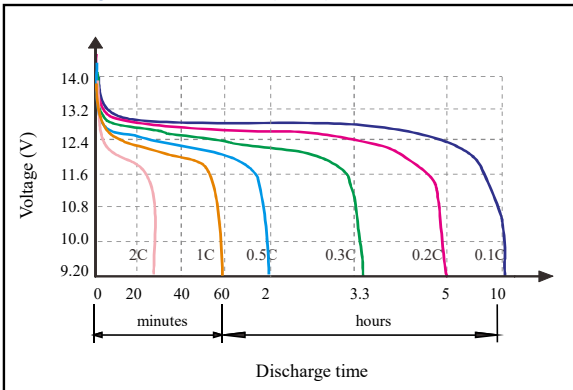
Terminal type (mm)



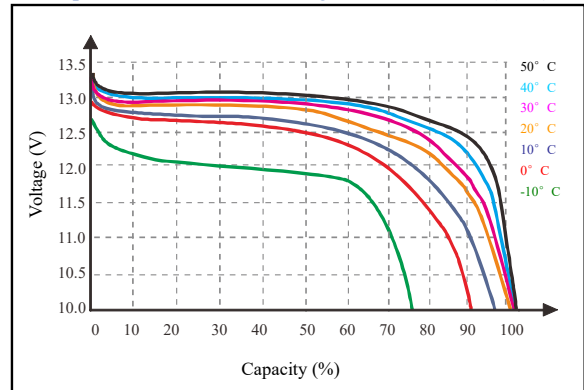
Characteristics

Electrical Parameters (25°C)	Rated Voltage	12.8V
	Rated Capacity (C _s)	18Ah@25°C
	Energy	230Wh
	Months Self Discharge	<3%
	Charge Efficiency	99.5%@ 0.2C
	Discharge Efficiency	96-99%@ 1C
Terminal type		T2/T12
Internal resistance (Fully charged, 25°C)		≤150mΩ
Cycle life		>3000 cycles @ 0.2C 100%D.O.D
Capacity affected by temperature	40°C	101%
	25°C	100%
	0°C	90%
	-10°C	75%
Nominal operating temperature		25°C±3°C (77°F±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)
Water Dust Resistance		IP64
Charge Voltage		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, before use, rest 30 minutes
Charge Current		3.6A
Maximum Charge Current		9A
Charge Cut off Voltage		14.6V
Continuous Discharge Current		20A
Maximum Pulse Current		54A (<100ms)
Discharge Cut Off Voltage		11.2V
Communicate Protocol (optional)		Default none (RS485 option)
SOC (optional)		Default none (Bluetooth option)
Application connection		4 string 4 parallel (Need equalize first)
Mechanical	Cells	4 Strings
	Container	ABS

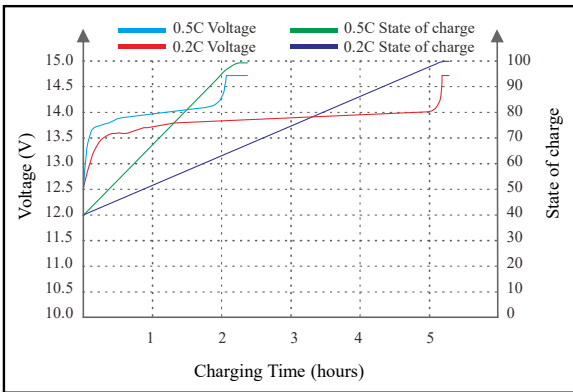
● Discharge characteristics (25°C)



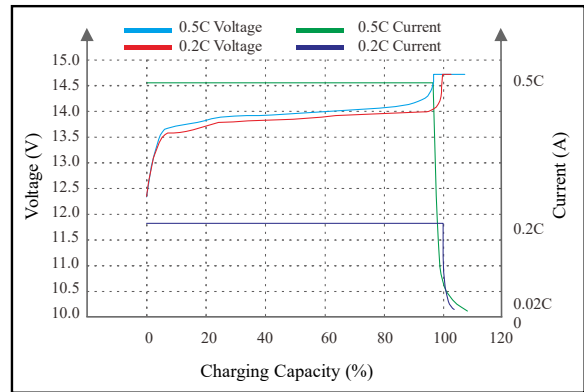
● Temperature affect on discharge characteristics (0.5C)



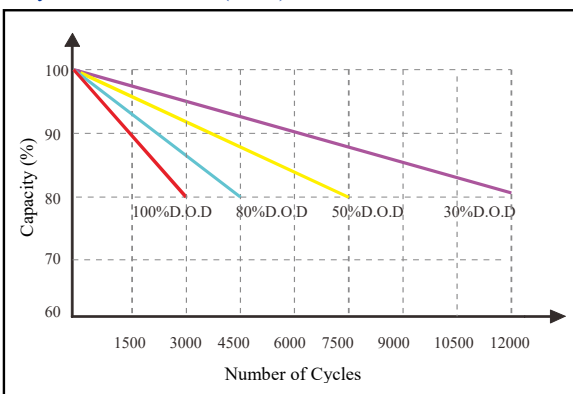
● State of Charge Curve (25°C)



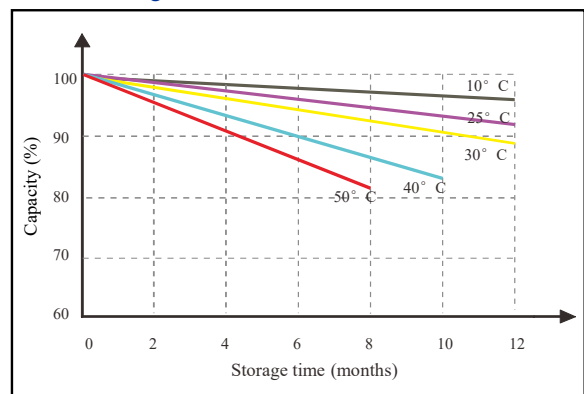
● Charge characteristics (25°C)



● Cycle life on D.O.D (25°C)



● Self Discharge Characteristics Curve



Note 2: The above curves are based on laboratory testing data @ 25°C 40%RH.