NPP Power Co., Ltd

NPP
CLEAN ENERGY, SAFE POWER

NSFD050Q10 12V50Ah

$LiFePO_4$ 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.

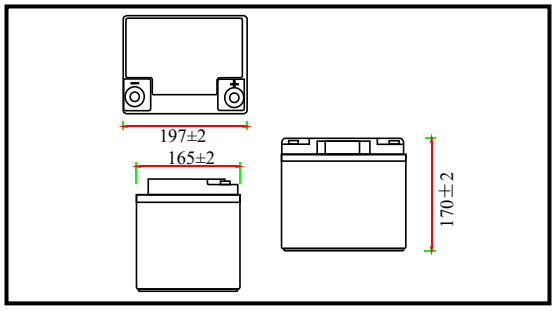
Superior Safety: Multi-protection methods built inside to protect the battery from overcharge, over discharge and short circuit situation.

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).

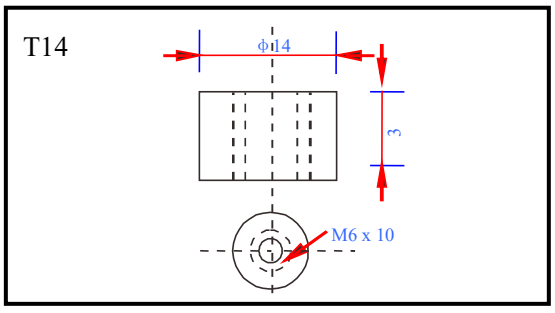
Specifications

Nominal voltage		12V
Nominal capacity		50Ah
Dimensions	Length	197±2mm (7.76inch)
	Width	165±2mm (6.50inch)
	Height	170±2mm (6.69inch)
	Total height	170±2mm (6.69inch)
Approx. weight		6.30kg (13.89lbs)±4%

Outer dimensions (mm)



Terminal type (mm)

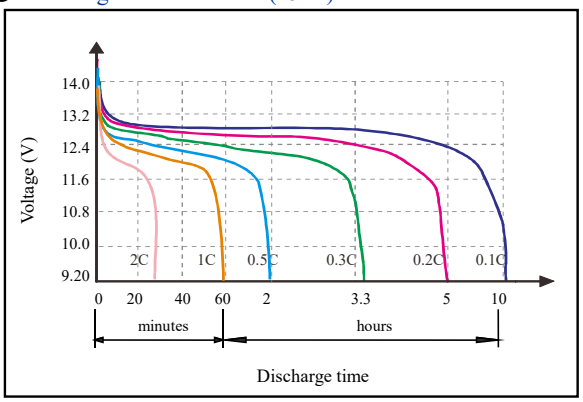


Characteristics

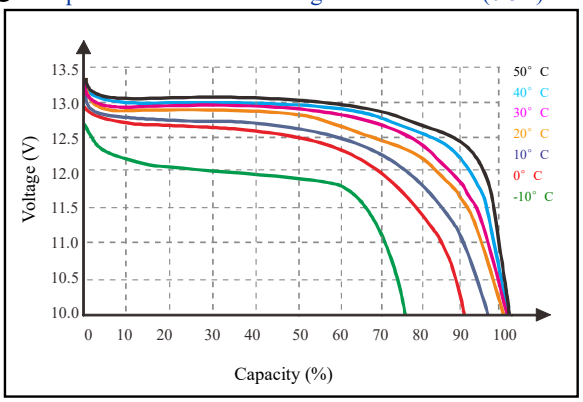
Electrical Parameters (25°C)	Rated Voltage	12.8V
	Rated Capacity (C_5)	50Ah@25°C
	Energy	640Wh
	Months Self Discharge	<3%
	Charge Efficiency	99.5%@ 0.2C
	Discharge Efficiency	96-99%@ 1C
Terminal type		T14
Internal resistance (Fully charged, 25°C)		≤16mΩ
Cycle life		>3000 cycles @ 0.2C 100%D.O.D
Capacity 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		10A
Maximum Charge Current		25A
Charge Cut off Voltage		14.6V
Continuous Discharge Current		50A
Maximum Pulse Current		150A (<100ms)
Discharge Cut Off Voltage		11.2V
Communicate Protocol (optional)		Default none (RS485 option)
SOC (optional)		Default none (Bluetooth option)
Application connection		1 string 1 parallel
Mechanical	Cells	4 Strings
	Container	ABS

Note 1: Please always refer to the latest edition of our technical manual that published on our website to ensure safe and efficient operation.

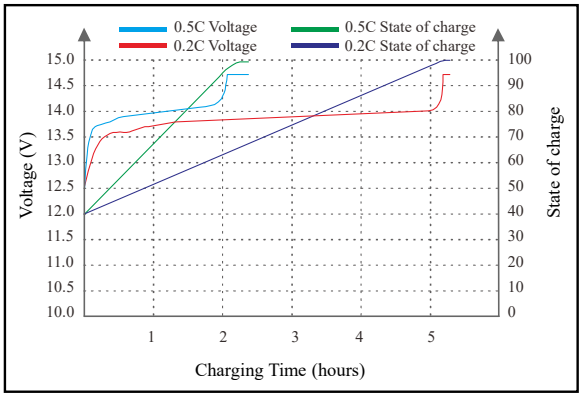
Discharge characteristics (25°C)



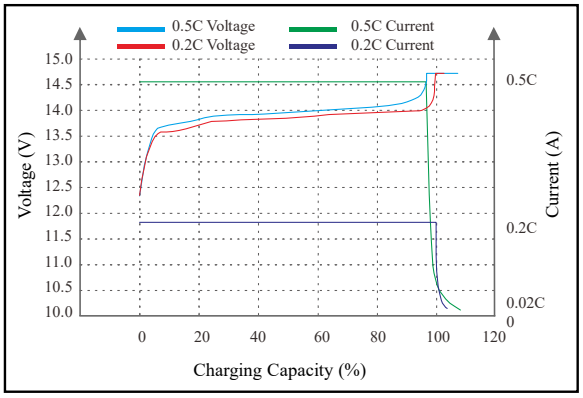
Temperature affect on discharge characteristics (0.5C)



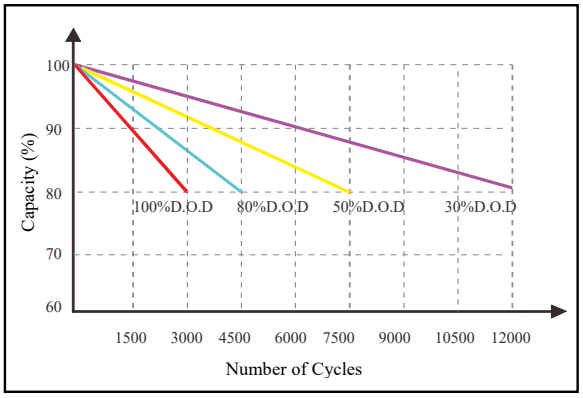
State of Charge Curve (25°C)



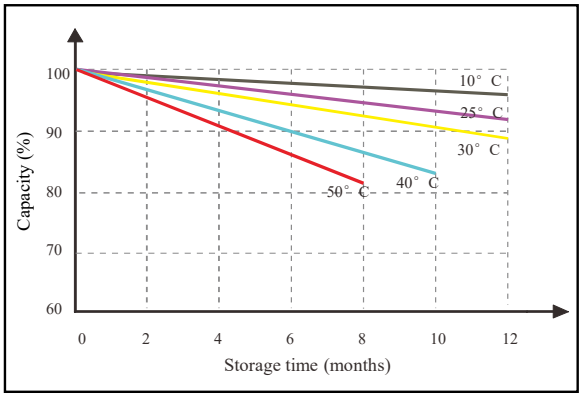
Charge characteristics (25°C)



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.