

NSFD012Q17 12V12Ah

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.

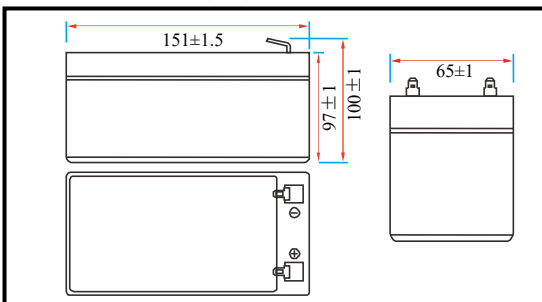
High Efficient: Higher round-trip energy efficiency of the average (92%) than lead acid battery 80% (discharge from 100% to 0% and back to 100% charged).



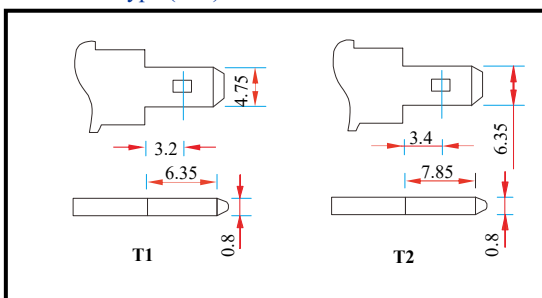
Specifications

| | | |
|------------------|--------------|----------------------|
| Nominal voltage | | 12V |
| Nominal capacity | | 12Ah |
| Dimensions | Length | 151±1.5mm (5.94inch) |
| | Width | 65±1mm (2.56inch) |
| | Height | 97±1mm (3.82inch) |
| | Total height | 100±1mm (3.94inch) |
| Approx. weight | | 1.35kg (3.09lbs)±4% |

Outer dimensions (mm)



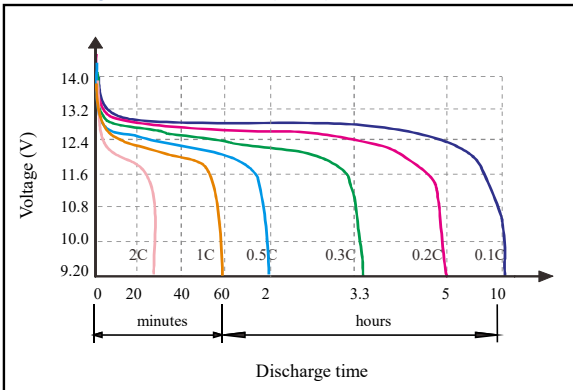
Terminal type (mm)



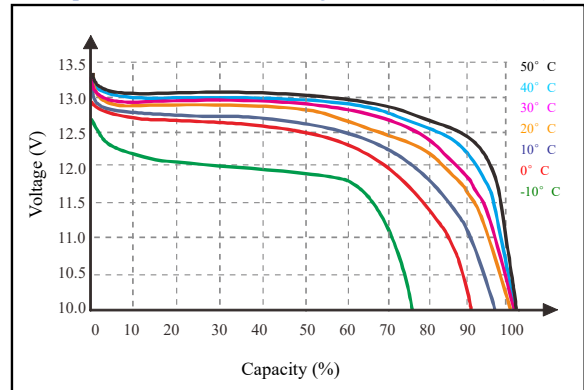
Characteristics

| | | |
|---|----------------------------------|---|
| Electrical Parameters (25°C) | Rated Voltage | 12.8V |
| | Rated Capacity (C ₅) | 12Ah@25°C |
| | Energy | 153Wh |
| | Months Self Discharge | <3% |
| | Charge Efficiency | 99.5%@ 0.2C |
| | Discharge Efficiency | 96-99%@ 1C |
| Terminal type | | T1/T2 |
| 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 | | 2.4A |
| Maximum Charge Current | | 6A |
| Charge Cut off Voltage | | 14.6V |
| Continuous Discharge Current | | 20A |
| Maximum Pulse Current | | 36A (<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 |

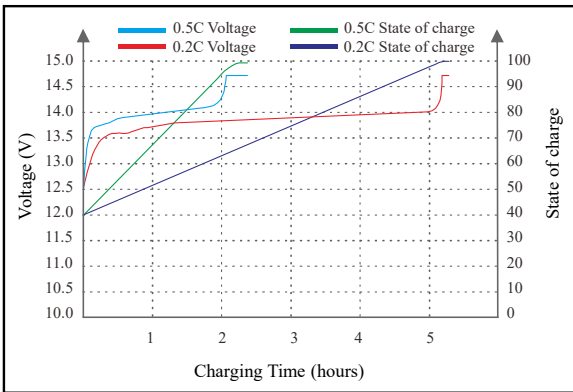
● Discharge characteristics (25°C)



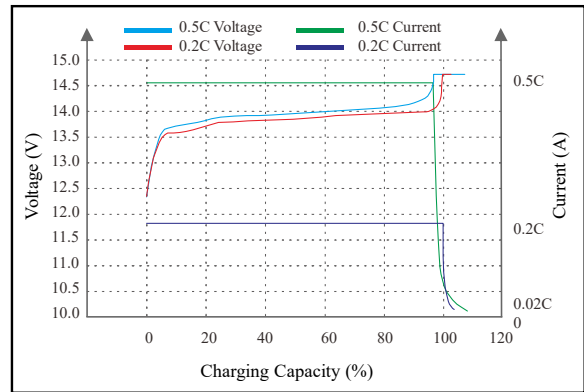
● Temperature affect on discharge characteristics (0.5C)



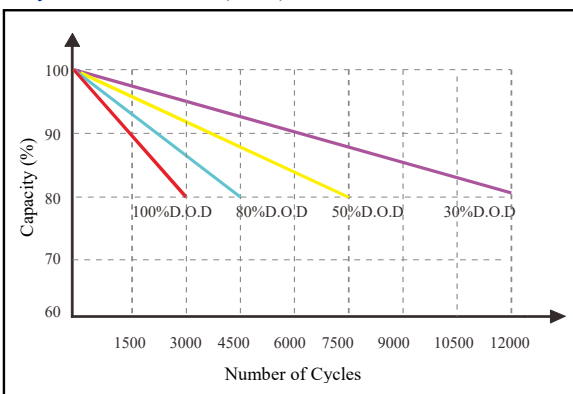
● State of Charge Curve (25°C)



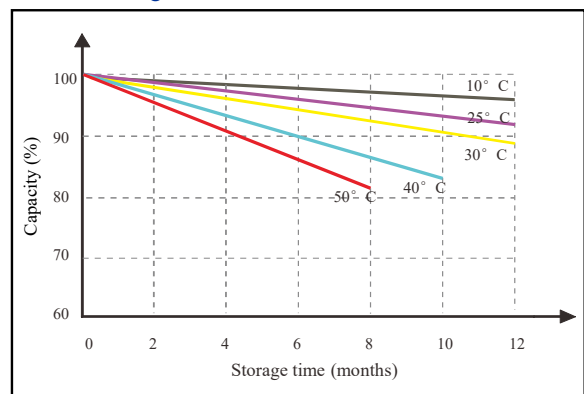
● Charge characteristics (25°C)



● 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.