

NLI-12V20NB / Data sheet

12V 20Ah

NITRO[®]
Lithium · LiFePO₄



SPECIFICATIONS

Electrical Specifications

Nominal Voltage	12.8 V
Nominal Capacity	20 Ah
Energy	256 Wh
Parallel Connection	Max. 10 units
Serial Connection	Max. 4 units
Circuit Protection	Overcharge, Overdischarge, Overcurrent, Overtemperature, Short circuit
Cycle Life	3000 cycles @ 100% DOD and 6000 @ 80% DOD
Self Discharge	Less than 3% per month
Charge Efficiency	100% @ 0.2C
Discharge Efficiency	98-100% @ 1C

Charge Specifications

Charge Voltage	14.4 ± 0.2 V
Standard Current	10 A

Discharge Specifications

Standard Current	10 A
Max. Continuous Current	20 A
Cut-off Voltage	10 V

Mechanical Specifications

Dimensions	181.5 x 77 x 167.5 mm High (7 1/8" X 3" X 6 9/16")
Approx Weight	2.5 kg (5.5 lbs)
Terminal Type	NB, Nuts and Bolts
Case Color/material	Black Plastic case (ABS)
IP Rating	IP65

Temperature Specifications

Charge Temperature	0°C to 55°C (32°F to 131°F)
Discharge Temperature	-20°C to 60°C (-4°F to 140°F)
Storage Temperature	-5°C to 45°C (23°F to 113°F)

KEY POINTS

- **Cell match:**

More strict cell matching standard, the difference of Internal resistance is 1 mΩ and voltage is 5 mV.

- **Automatic cells welding:**

Cells are assembled by Automatic welding equipments to ensure the quality reliability and consistency.

- **100% Cycle test:**

All battery packs are 100% cycle tested (Fully Discharged→Fully Charged→Fully Discharged→60% Charged) before package and all test reports are stored.

- **Unique tracking number:**

All battery packs are lasered an unique number on the case side for quality tracking.

KEY BENEFITS

- **Higher qualified cylindrical cell:**

UL1642, IEC62619, IEC62133 listed with Cycle life more than 3000 times and excellent consistency.

- **Stronger BMS:**

Can support the batteries in parallel and series connection.

- **More stable and firm internal structure:**

Cell holders can well protect and separate the cells to avoid any circuit short risk caused by vibration or impact or over current, and improve the heat dissipation.

FEATURES

- **Longer Cycle Life:**

Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.

- **Lighter Weight:**

About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement for lead acid batteries.

- **Higher Power:**

Delivers twice power of lead acid battery, even high discharge rate, while maintaining high energy capacity.

- **Wider Temperature Range:**

-20°C ~ 60°C.

- **Superior Safety:**

Lithium Iron Phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation.

- **Increased flexibility:**

Modular design enables deployment of up to four batteries in series and up to ten batteries in parallel.

CERTIFICATIONS

- UL1642 (Cell)

- IEC62133 (Cell)

- IEC62619 (Cell)

- CE (Pack)

- ROHS (Cell)

- UN38.3 (Cell / Pack)



MARKET APPLICATIONS



RV



Marine



Golf cart



Light EV



Energy storage



Cleaning



Robotics



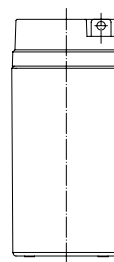
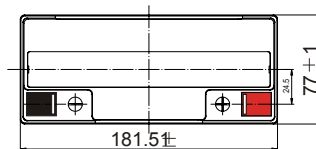
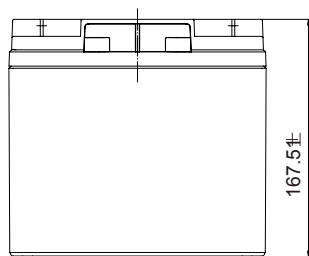
Lighting

PACKAGE

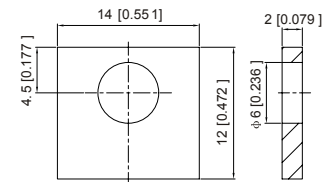


Product Classification: UN3480, Class 9
Product Transport Certification: UN38.3

DIMENSIONS

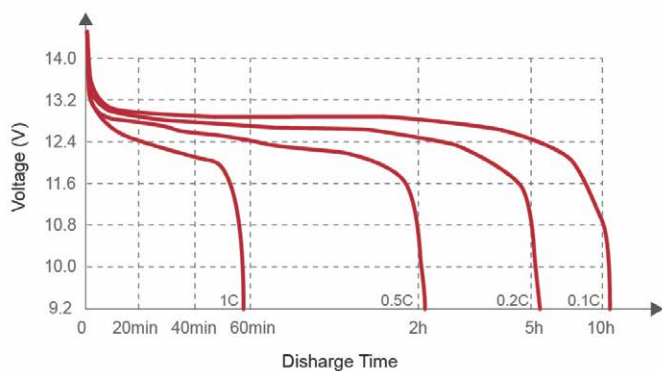


T3 Nuts and bolts
Unit : mm [inches]

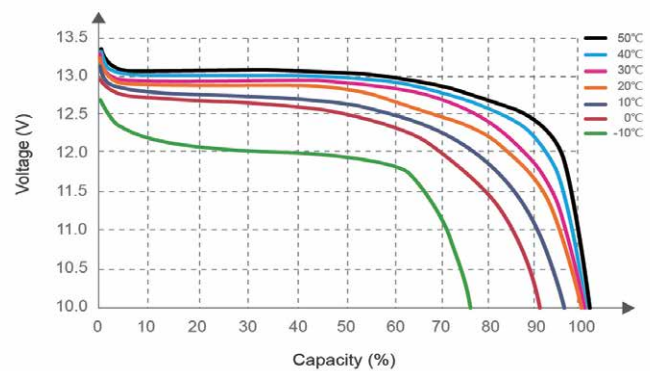


PERFORMANCES

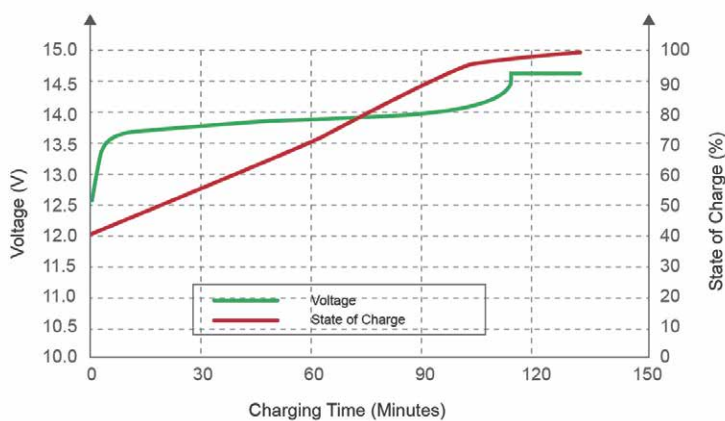
Different Rate Discharge Curve (25°C)



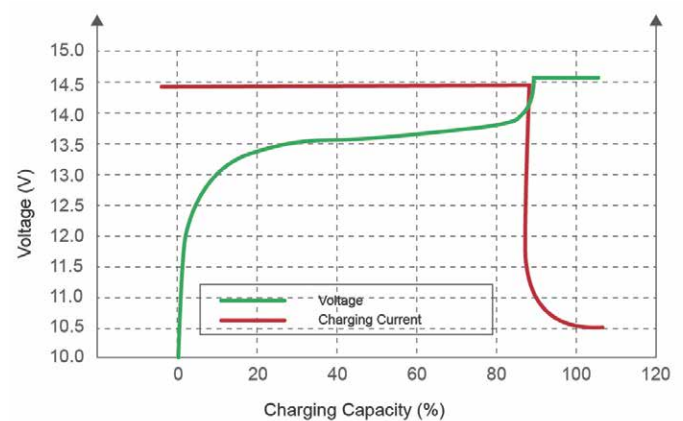
Different Temperature Discharge Curve (0.5°C)



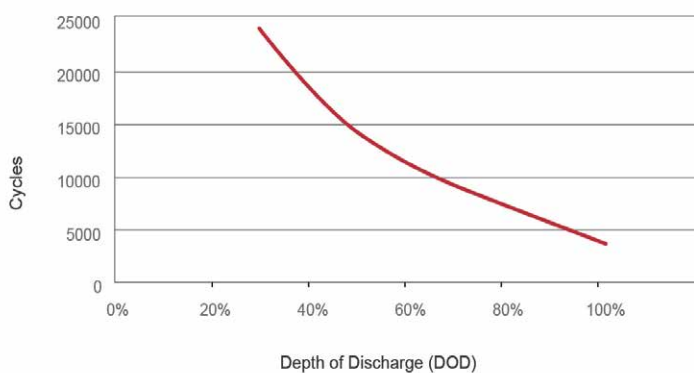
State of Charge Curve (0.5°C, 25°C)



Charging Characteristics (0.5°C, 25°C)



Different DOD Discharge Cycle Life Curve (1°C)



Different Temperature Self Discharge Curve

