

# NLI-12VGC2I / Data sheet

12V 140Ah

**NITRO**<sup>®</sup>  
Lithium·LiFePO<sub>4</sub>



## SPECIFICATIONS

### Electrical Specifications

|                      |                                                                        |
|----------------------|------------------------------------------------------------------------|
| Nominal Voltage      | 12.8 V                                                                 |
| Nominal Capacity     | 140 Ah                                                                 |
| Energy               | 1792 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 | 50 A         |

### Discharge Specifications

|                         |       |
|-------------------------|-------|
| Standard Current        | 70 A  |
| Max. Continuous Current | 150 A |
| Cut-off Voltage         | 10 V  |

### Mechanical Specifications

|                       |                                                        |
|-----------------------|--------------------------------------------------------|
| BCI Group             | GC2                                                    |
| Dimensions            | 260 x 180 x 265 mm High (10 1/4" X 7 1/16" X 10 7/16") |
| Approx Weight         | 13.2 kg (29.0 lbs)                                     |
| Terminal Type         | M8                                                     |
| Terminal Torque       | 8-12 Nm (71-106 in-lbs)                                |
| Case Color/material   | Black Plastic case (ABS)                               |
| IP Rating             | IP65                                                   |
| State of Charge Meter | Yes, State of charge gauge is optional #FG001          |

### 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



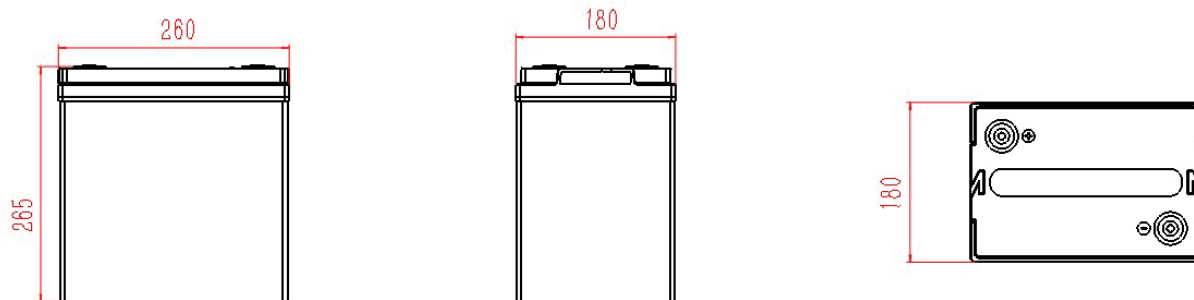
Lighting

## PACKAGE



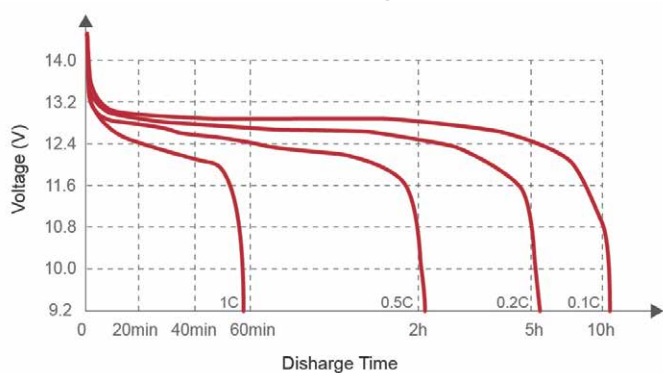
**Product Classification: UN3480, Class 9**  
**Product Transport Certification: UN38.3**

## DIMENSIONS

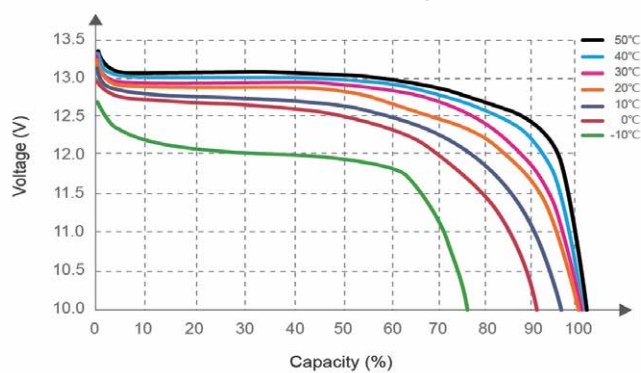


## PERFORMANCES

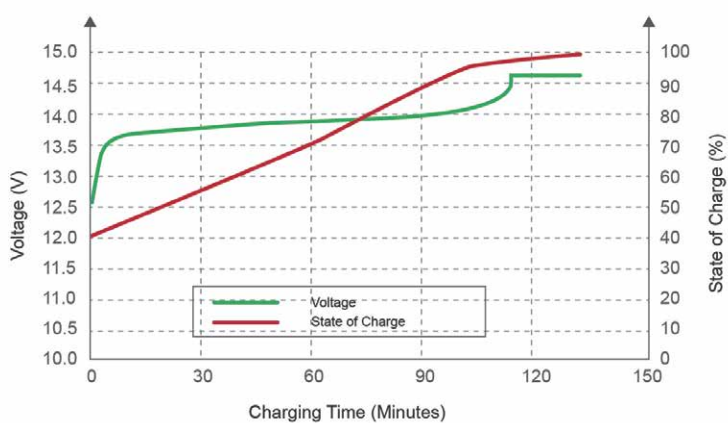
Different Rate Discharge Curve (25°C)



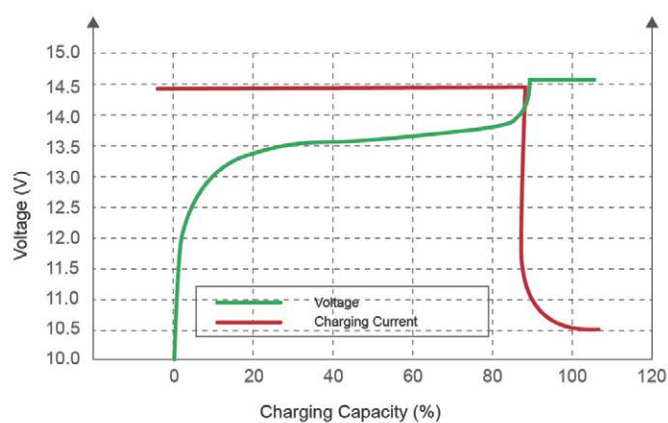
Different Temperature Discharge Curve (0.5°C)



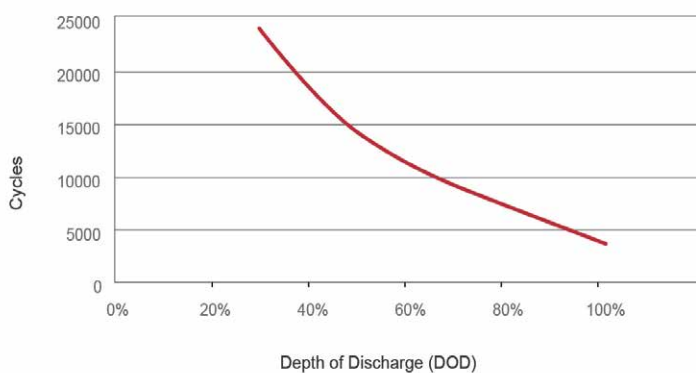
State of Charge Curve (0.5°C, 25°C)



Charging Characteristics (0.5°C, 25°C)



Different DOD Discharge Cycle Life Curve (1°C)



Different Temperature Self Discharge Curve

