

# 100A LITHIUM ION BATTERY / 48V

Lithium Ion Iron Phosphate LiFePO<sub>4</sub>



## 48-100Ah Lithium Ion Battery Specifications

Battery Type: LiFePO<sub>4</sub>

Nominal Voltage: 51.2V

Nominal Capacity: 100Ah

Internal Impedance:  $\leq 30\text{m}\Omega$

Nominal Charge Voltage:  $58.4 \pm 0.04\text{V}$

Discharge Cut-off Voltage: 36.8V

Charge Current: 80 amps Max. Continue

Discharge Current: 350A withstand 3s

Charge Method: CC (constant charge) | CV (constant voltage)

Cycle Life: After 2,000 cycles, capacity > 80% nominal capacity

Weight: 126 lbs. (57Kg.)

Size (L\*W\*H): 26.6" x 13.1" x 7.4" (676 x 333 x 187mm)

## Operating Temperatures

Operating Temperature Charge: 77-86 F (25-30 C)

Operating Temperature Discharge: 77 – 86 F (25–30 C)

## Storage Temperature

Short: within one month -20~35 C 45~75%RH

Long term: above one month – 10~30 C, 45~75%RH

Relative Humidity: 65%  $\pm$  20%

\*\*\* Please note that these battery specifications are subject to change without notice.

## Unit Details

### Cycle Life

Temperature: 77°-86°F (25-30°C) Charge, 1C CC to 58.4V, and CV to 200mA cut off Discharge, 1C DC discharge to 36.8V, 80% or more of 1st cycle capacity at 1C discharge of operation, cycles quantity not less than 2000 cycles.

Remarks: Rest 10 min after charge and discharge

### Electrical

#### Standard Charge

Charging the cell initially with constant current at 1C and then with constant voltage at 58.4V (accuracy  $\pm 0.05\text{V}$ ) until charging current declines to 1C at 77°-86°F (25-30°C)

#### Standard Discharge

Discharging the cell with constant current at 1C till cut-off voltage at 36.8V. Temperature: 77°-86°F (25-30°C)

#### Initial Internal Impedance

This means AC impedance of the pack measured at 1KHz after half full charged. Initial Internal Impedance  $\leq 30\text{m}\Omega$

#### Initial Capacity

The capacity means the discharge capacity of the battery, which is measured with discharge current of 1C with 36.8V cut-off voltage after the standard charge. Initial Capacity @95% normal capacity. Temperature: 77°-86°F (25-30°C)

#### Charger Choice

- Standard charger: 58.4V/100A
- Charging mode: CC/CV
- CC: charging current  $\leq 100\text{A}$
- CV: constant voltage 58.4V
- Charging cut off condition  $\leq 200\text{mA}$