VHR TL51100LFP-3U

TL-LFP Series Lithium-ion Battery Module

Introduction

Ailink VHR51100LFP is $LiFePO_4$ (lithium iron phosphate) battery module. With the advanced $LiFePO_4$ cell technology and smart BMS, the product have the benefit of long cycle life, small size, light weight, high safety, environmental protection and strong environmental adaptability, it is ideal for backup and energy storage application even in harsh outdoor environments.

Features and Benefits

- High energy density:
- light weight, saving space.
- Delivers up to 3X the energy density of conventional lead acid batteries.

- Long cycle life:
- Proven $LiFePO_4$ chemistry, maximum cycle life for deep cycle and hybrid application.

- Integrated Smart Battery Manage System(BMS):
- Protect internal cells from overcharge, over-discharge, high current, etc. ensure battery safety and reliability.
- Equalization and balance each cell, prolong battery life.
- Intelligent monitors, remote measure, remote communication, remote control by RS485

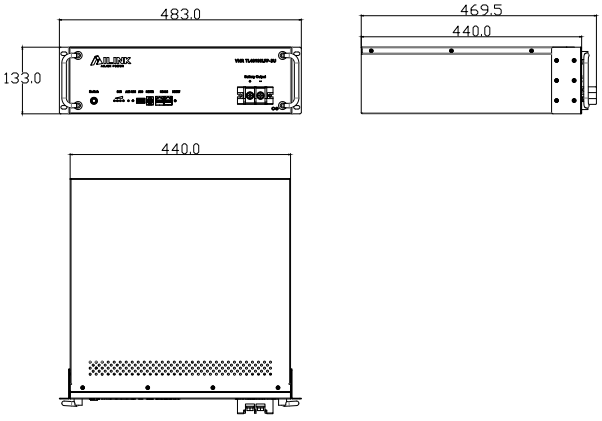
- Support parallel connection to increase capacity

- LED status and alarm indication

- Maintenance free

- Fast charge capability

Dimensions in mm



Main Applications

- Telecommunication
- UPS and IDC Datacenter
- Renewable Energy Storage System

General Specifications

Item	Description
Nominal voltage	51.2 V
Nominal capacity	100 Ah (0.2C to 44.0V @ 25)
Operation voltage	44.0 V
Charge voltage	58.0 V
Charge current (Max.)	100 A
Charge current (Standard)	20 A (0.2C)
Max. Discharge current	100 A
Dimensions	440 x 440 x 133 (WxDxH in mm) (3U in height)
Weight	45.0 (±2) kg
Design life	10+ years @ 25℃ 6000 80% DoD 60% eol @ 25℃
Communication	RS485,RS232
IP grade	IP20

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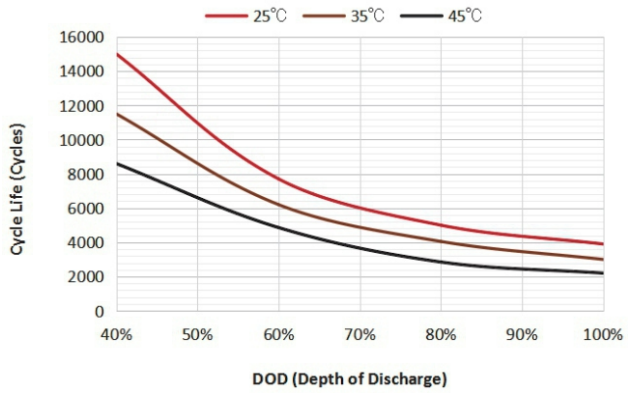
Operation Environment

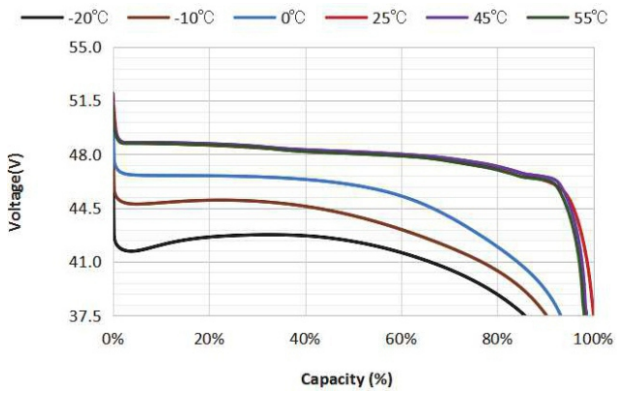
Temperature range	Discharge -20 to +60℃ Charge 0 to +60℃ Storage -5 to +45℃
Temperature recommendation	Discharge +15 to +35℃ Charge +15 to +35℃ Storage 0 to +40℃ (6 months, >50%SOC)
Humidity	5% to 95%, no condensation

Performance Curve

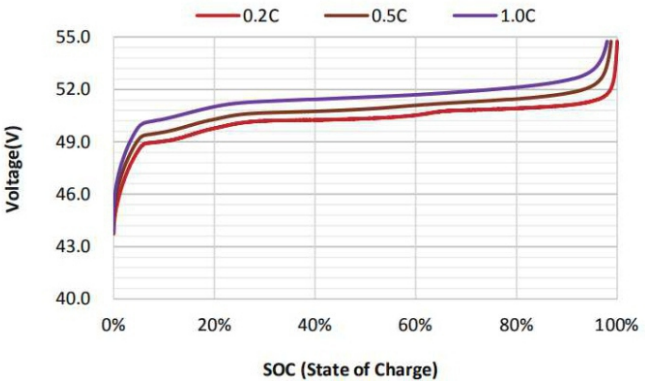
Cycle life vs. DOD at different temperature



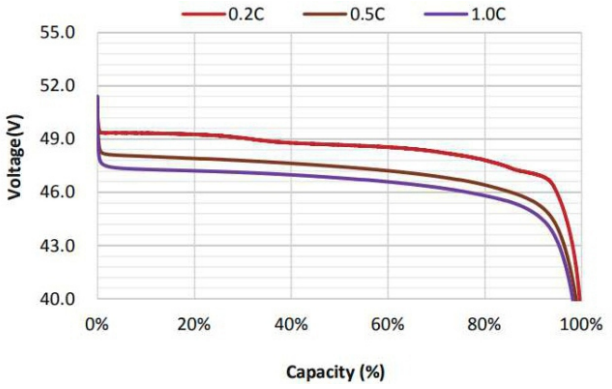
Discharge curve at different temperature



Charge curve with different current rate@25℃



Discharge curve with different current @25℃



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