

LFP12300(12.8V300AH)

Document: Lithium Battery datasheet

Doc. Version: V4.0

Issue Date: 1-1-2024

Overview

NEATA Lithium iron phosphate battery module which designed for storage and power supply system application.

This battery module integrated with intelligent BMS with big advantages on safety, cycle life, energy density, temperature range and environmental protection.

This product specification describes the type, size, structure, electrochemistry performance, service life, and BMS characteristics.

The specification will be updated based on different customer requirement.

Advantages

The battery module consists of LFP cells, wire, BMS and ABS container.

- Packed with high performance LFP single cell, long life, safety and wide temperature range
- High energy density, small size, light weight, no pollution;
- Packing with single cell container, fire retardant wire and copper connecting bar, stable and safe.
- Built-in BMS, with battery voltage, current, temperature and health management.
- LCD(optional) indicate the battery SOC and operating status.
- Support Max 4pcs in series.
- Flexible customization of dimensions
- More than 15 years design life, Stable performance, maintenance-free

Battery Images



Safety



Multipurpose

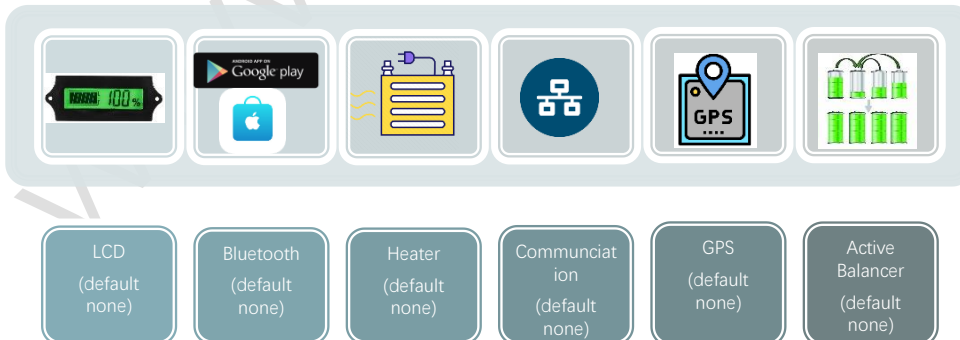


Simple Maintenance



Fast Charge/Discharge

Customization Functions



SHENZHEN NEATA POWER TECH CO.,LTD Reminder:

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Battery specification

ELECTRICAL SPECIFICATIONS

Cell Type - Chemistry	LiFePo4
Nominal Voltage	12.8V
Amp Hour Capacity	300AH
Dimensions	521*268*220mm
Weight	27.5±0.2kgs
Terminal Type	M8
Case Material	ABS-Sealed
Case IP Rating	IP65
Series connections	Max to 51.2V
Parallel connections	No limited
Storage Temperature	(-10 to 40°C)
Resistance - Milliohms	< 10
Self Discharge per Month	< 2%

CHARGE SPECIFICATIONS

Floating Charge Voltage	≤13.8V
Boost Charge Voltage	≤14.2V
Recommend Charge Current	≤60A
Max Charge current	≤300A
Charge current (0 to -10°C)	<0.1C
Charge current (-20 to -10°C)	<0.05C
Charge Temperature	(0 to 45°C)

DISCHARGE SPECIFICATIONS

Recommend Discharge current	≤300A
Max Cont Discharge current	≤320A
Max Discharge Voltage	≥10.4V
Discharge Temperature	(-20 to 60°C)

BMS SPECIFICATIONS

Version	Softversion	
Code	J-B04S300	
Primary Charge Current Protection	320±10A	10S±3S
Second Charge Current Protection	NA	
Third Charge Current Protection	NA	
High Voltage Protection	15±0.2V	2S±1S
Reconnect Voltage	14.4V	
Primary Discharging Current Protection	320±10A	10S±3S
Second Discharging Current Protection	1300±120A	0.3S±0.2S
Third Discharging Current Protection	NA	
Low Voltage Protection	8.8±0.4V	
Reconnect Voltage	10.4±0.4V	
High Temp Protection	65±3°C	
Reconnect Temp	50°C	
Balancing voltage	13.2±0.2V	
Balancing current	200±50mA	
Shortage current	1800±300A	

Technical specifications according EU regulation (ES) 2023/1542

Rated capacity 300Ah
Capacity fade < 1%
Power 3840 W
Power fade < 1%
Internal resistance < 10m Ω
Internal resistance increase 0,5%
Energy round trip efficiency 99,98%
Energy round trip fade < 0.5%
Battery design time 15 years
Battery design in cycles > 6000cycles@0.2C
Applied discharge rate 1C = 300A
Applied charge rate 1C = 300A
Ratio between nominal battery power (W) and battery energy (Wh) > 98%
Depth of discharge in the cycle-life test 80%DOD
Power capability at 80 % state of charge > 80%
Power capability at 20 % state of charge > 20%

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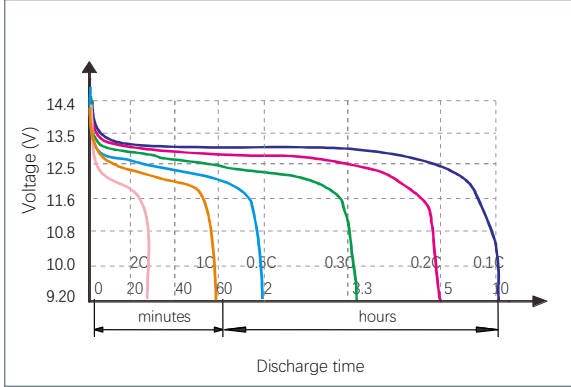
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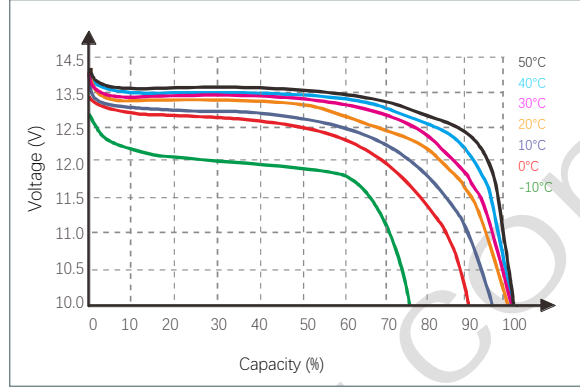
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Performance curve

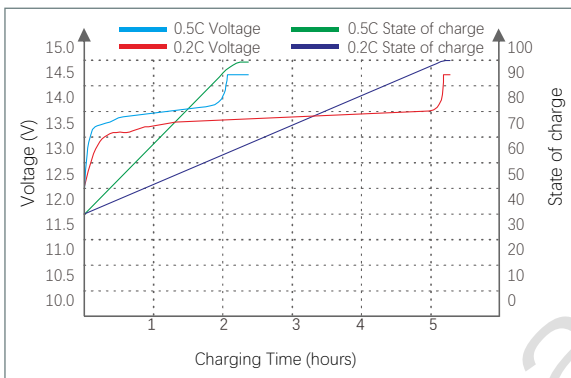
● Discharge characteristics (25°C)



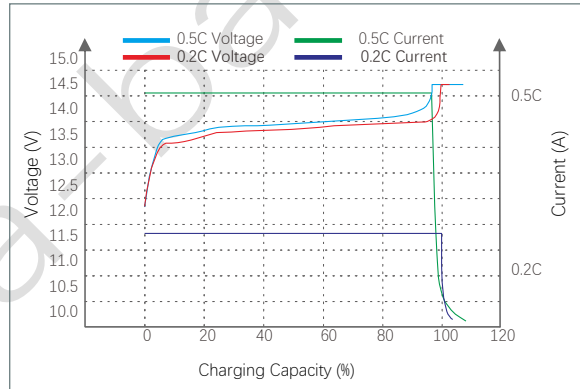
● Temperature effect on discharging (0.5C)



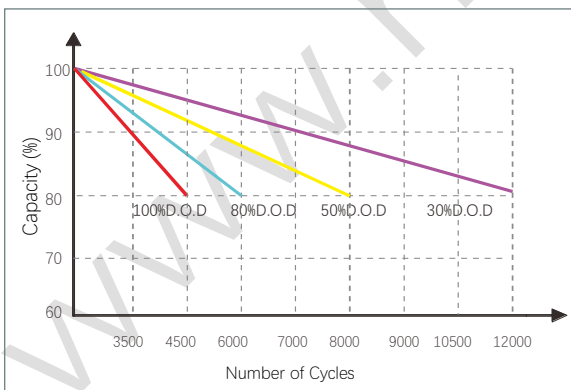
● State of Charge Curve (25°C)



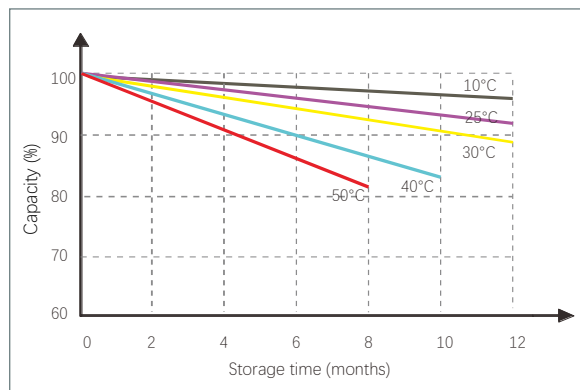
● Charge characteristics (25°C)



● Cycle Life On D.O.D 0.2C Rate (25°C)



● Self-Discharging Curve



Note 2: The above curves are based on laboratory testing data @ 25°C 40%RH



EU DECLARATION OF CONFORMITY

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