

## LITHIUM ION PHOSPHATE BATTERY



ELB lithium battery LiFePO4 series batteries offer BMS controlled safety, long life, fast-charging performance. The BMS embeds smart balancing algorithms that control all cell voltages in the battery, making sure they are constantly at the same voltage level, optimizing battery capacity.

ELECTRICAL SPECIFICATION	
Nominal Voltage	51.2V
Nominal Capacity	50AH
Stored Energy	2560Wh
Resistance	80 mΩ
Self Discharge Rate	<3% per Month
Maximum Continuous Charge Current	50A
Maximum Continuous Discharge Current	50A
Charge Cut-off Voltage	58.4 V
Discharge Cut-off Voltage	40V



ISO9001



ISO14001



ISO18001



IEC62133



CE



UL1642(CELL)



UN38.3



MSDS

MECHANICAL SPECIFICATIONS	
Dimensions (mm)	L483×W400×H133
Weight	31.5kg
Terminal Type	Screwed Terminal
Case Material	SS

TEMPERATURE SPECIFICATIONS	
Discharge Temperature	-20 to 60 °C
Charge Temperature	0 to 55 °C
Storage Temperature	-20 to 55 °C

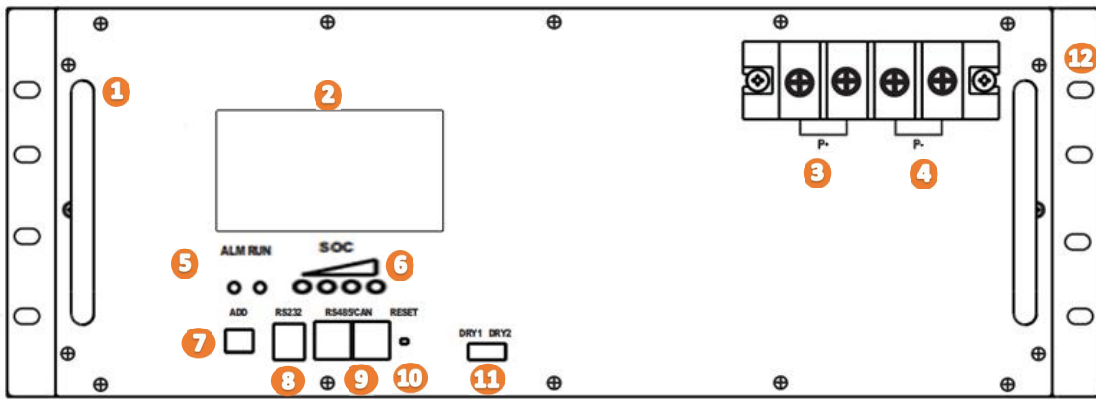
OTHERS SPECIFICATIONS	
Short Circuit Protection	Automatically recover after removal of short
Life Expectancy (years)	10 years at one cycle per day

### COMPLIED STANDARD

- ✓ ISO9001(Factory)
- ✓ ISO14001(Factory)
- ✓ ISO18001(Factory)
- ✓ UN38.3
- ✓ MSDS
- ✓ UN39.3(Shipping)
- ✓ IEC 62133(Cells)
- ✓ UL 1642(Cells)
- ✓ CE

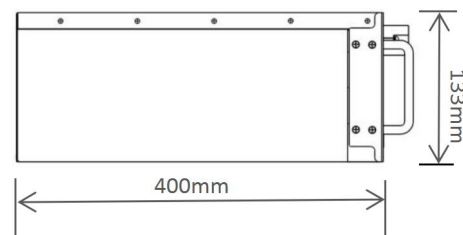
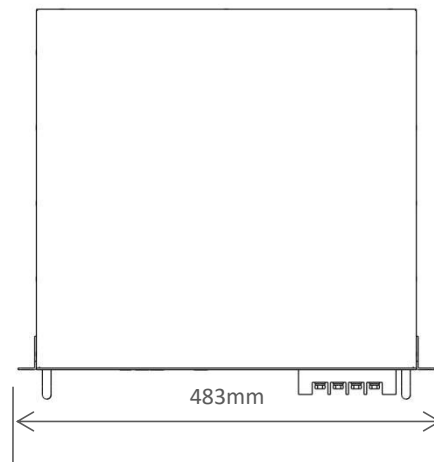
### INTELLIGENT BMS FUNCTION

- Overcharge detection function
- Over discharge detection function
- Over current detection function
- Short detection function
- Temperature detection function
- Balance function



- 1 Handel
- 2 LCD Display
- 3 Positive Terminal
- 4 Negative Terminal
- 5 Battery Status Indicator Light
- 6 SOC
- 7 ADD
- 8 RS232
- 9 RS485
- 10 RESET
- 11 DRY
- 12 Installation Hole

### BATTERY DIMENSIONS



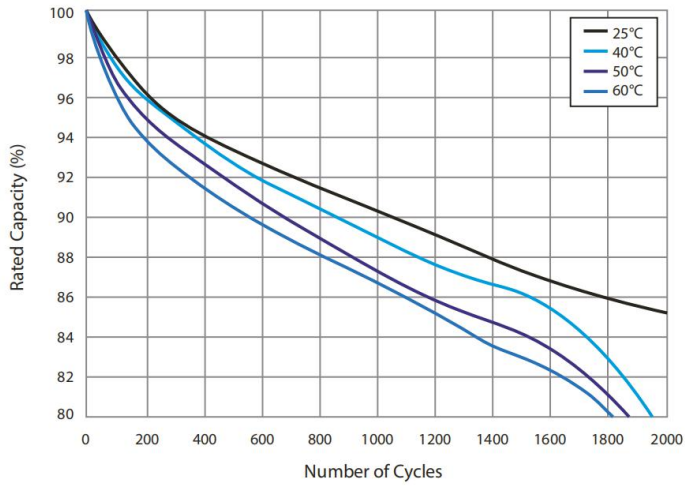
### COMMUNICATION PROTOCOL

RS485 port can realize monitor the State of Charge (SoC), State of Health (SoH), current, capacity, temperature, number of cycles, and voltage levels of the battery and individual cells.

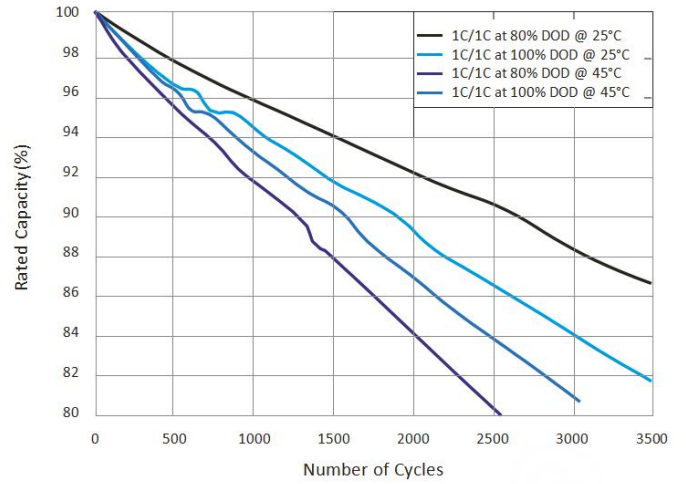
### BATTERY FEATURES

- Super safe lithium iron phosphate (LiFePO<sub>4</sub>) chemistry reducing the risk of explosion or combustion due to high impact, over-charging or short circuit situation.
- Battery Management System (BMS) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging.
- BMS enhanced design balances the battery cells, optimizing battery performance.
- Delivers twice the power of lead acid batteries, even at high discharge rates, while maintaining high energy capacity.
- Faster charging and lower self-discharge.
- Up to 10 times more cycles than lead acid batteries.
- Compact and only 40% of the weight of comparable lead acid batteries.

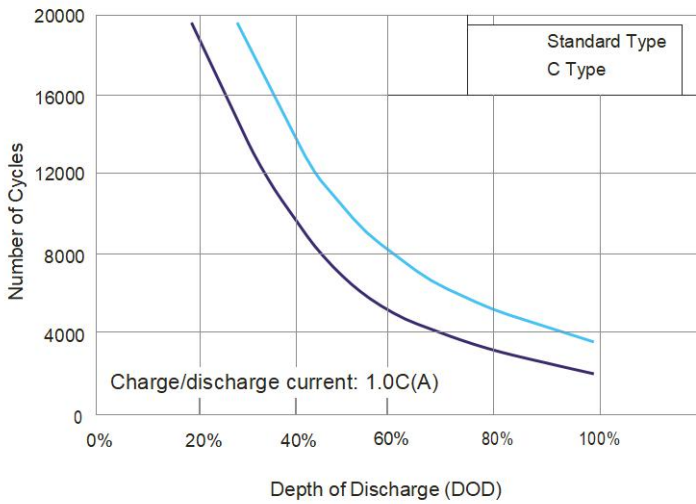
**PERFORMANCE CHARACTERISTICS**



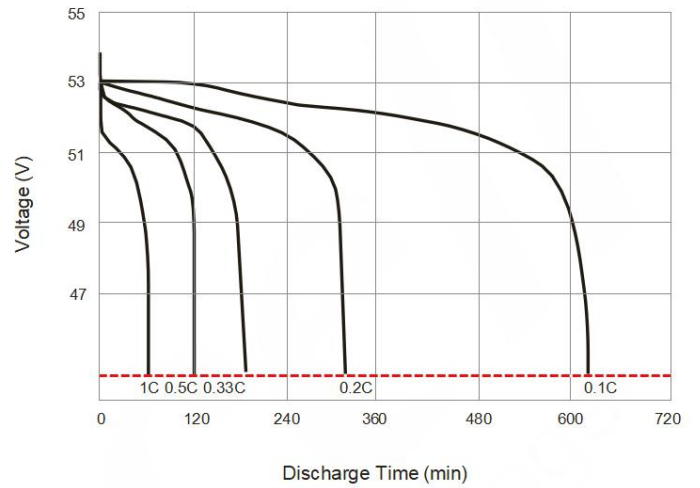
**100% DOD Cycle Curves at Different Temperatures**



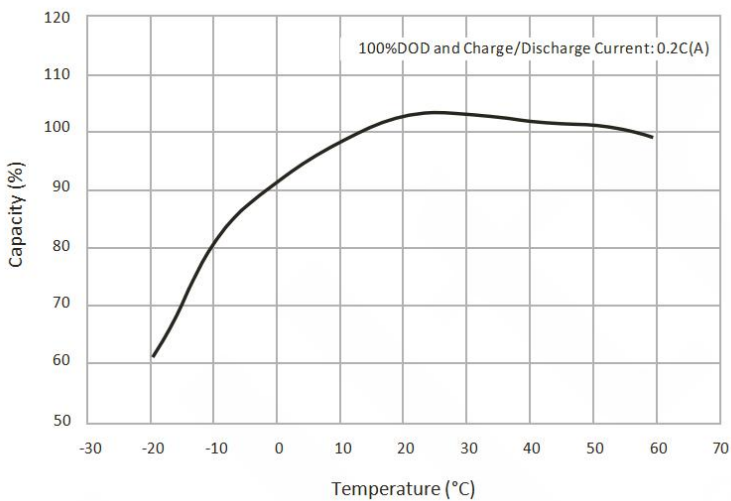
**1C Cycle Curves at Different DOD & Temperatures**



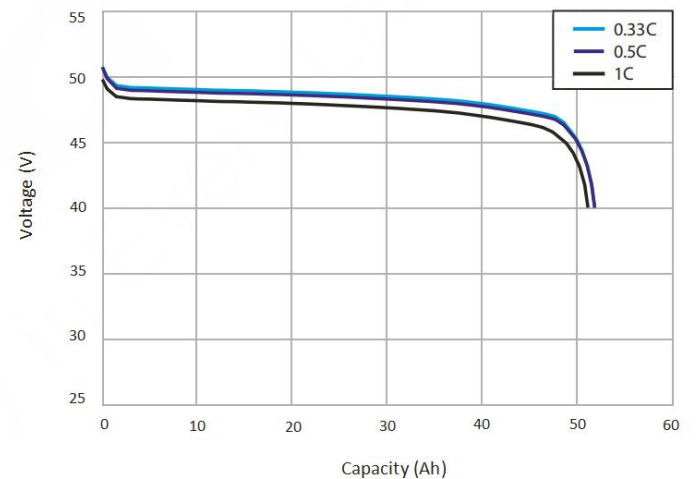
**DOD in Relation to Cycle Life (25°C)**



**Discharge Time in Relation to Discharge Rate (25°C)**



**Temperature Effect in Relation to Battery Capacity**



**Discharge Capacity in Relation to Discharge Rate**

# ELB

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