

## LiFePO<sub>4</sub> Technology Brief Introduce

LiFePO<sub>4</sub> technology surpasses lead acid technology in all areas: reliability, performance, security, cleanliness...

- Weight/power ratio 70% lighter than lead acid batteries
- Battery life lasts 4 to 5 times longer than conventional lead acid batteries
- Very low self-discharge rate
- Wide range of operating temperatures from -20° C to 60° C
- Unlike lead acid batteries, incomplete charges have no impact on battery life
- Extra security leak-proof, as the battery does not contain acid. LiFePO<sub>4</sub> batteries can therefore be installed in any position without risk of leakage.

LiFePO<sub>4</sub> technology eliminates the risk of explosion or combustion.

LiFePO<sub>4</sub> batteries are equipped with protection against short circuit currents (BMS), which protects the battery from short circuits, overloads and deep discharge. The BMS also balances cells in order to guarantee longer battery life.



Long  
Life

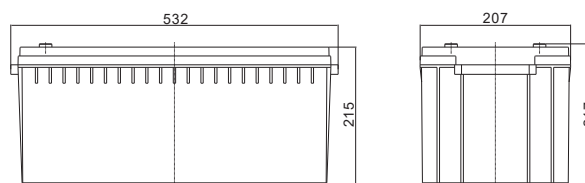
Lithium Iron  
Phosphate

Deep  
Cycle

## Applications

- Solar Power System
- Wind Energy Storage System
- UPS, Backup Power
- Telecommunication
- Electric Vehicles, Electric Mobility
- Medical Equipment
- Lighting

## Dimensions & Weight



## Technical Specifications

- Length: 532±1mm Width: 207±1mm Height: 215±1mm Total Height: 217±1mm
- Weight: 21±0.1kg

|                            |                                  |                                                           |
|----------------------------|----------------------------------|-----------------------------------------------------------|
| Electrical Characteristics | Nominal Voltage                  | 12.8V                                                     |
|                            | Nominal Capacity                 | 200Ah                                                     |
|                            | Energy                           | 1280Wh                                                    |
|                            | Terminal                         | M8                                                        |
|                            | Cycle Life                       | ≥6000cycles @80%DOD                                       |
|                            | Months Self Discharge            | < 3%                                                      |
|                            | Efficiency of Charge             | 200 % @0.2C                                               |
|                            | Efficiency of Discharge          | 96 ~99% @0.5C                                             |
| Standard Charge            | Charge Voltage                   | 14.6-15.2V                                                |
|                            | Charge Mode                      | 0.2C to 13.6V, then 13.6V, charge current to 0.02C(CC/CV) |
|                            | Charge Current                   | 30A                                                       |
|                            | Max. Charge Current              | 200A                                                      |
|                            | Charge Cut-off Voltage           | 14.6V±0.2                                                 |
| Standard Discharge         | Continuous Current               | 50A                                                       |
|                            | Max continuous discharge current | 200A                                                      |
|                            | Discharge Cut-off Voltage        | 10V                                                       |
| Environmental              | Charge Temperature               | 0 °Cto 45 °C(32 F to 113 F) @60±25 % Relative Humidity    |
|                            | Discharge Temperature            | -20 °Cto 60 °C(-4F to 140 F) @60±25 % Relative Humidity   |
|                            | Storage Temperature              | 0 °Cto 40 °C(32 F to 104 F) @60±25 % Relative Humidity    |
|                            | Water Dust Resistance            | IP64                                                      |
| Mechanical                 | Cell & Method                    | Square Cell 3.2V200Ah 4S*1P                               |
|                            | Plastic Case                     | ABS                                                       |
|                            | Dimensions (in./mm.)             | 532*207*215mm (Customized)                                |
|                            | Weight (lbs./kg.)                | Approx:21Kg                                               |
|                            | Gravimetric specific energy      | 102.4WH/KG                                                |
|                            | Bluetooth (optional)             | OPT                                                       |
|                            | LCD display (optional)           | OPT                                                       |

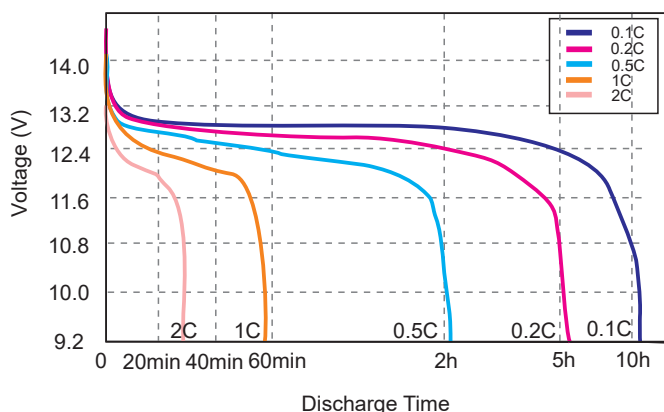
**Note:** The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **Amosolar** for the latest information.

## BMS Specifications

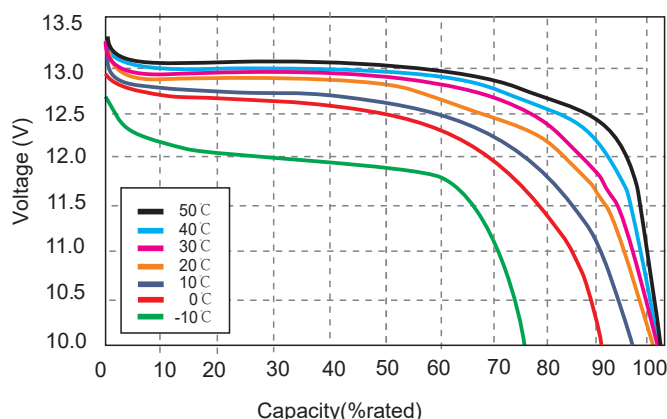
- Overcharge detection function
- Over discharge detection function
- Over current detection function
- Temperature protection
- Short detection function
- Balance function

## Performance Characteristics (Data test from 4 Series Cell)

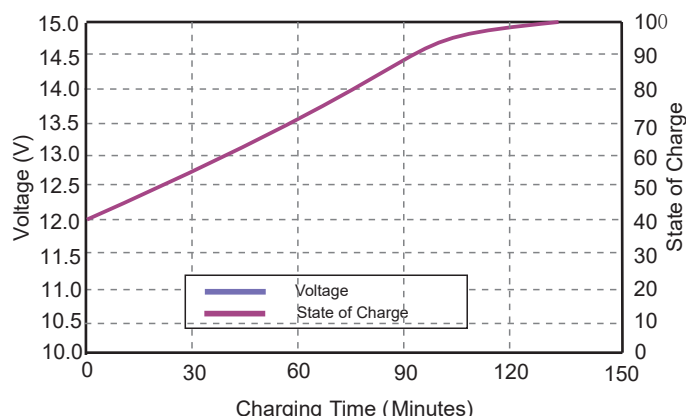
### Different Rate Discharge Curve (25°C)



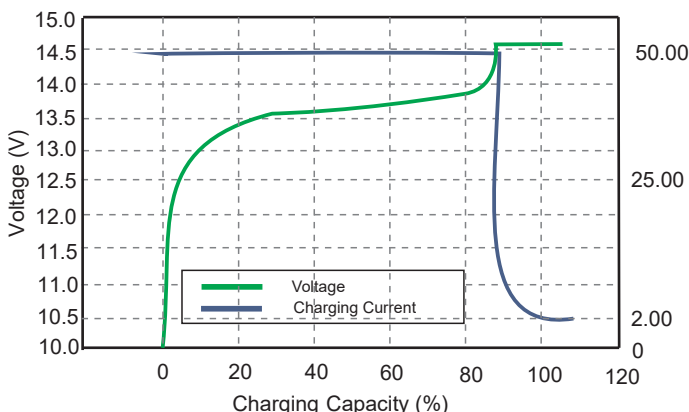
### Different Temperature Discharge Curve At 0.5c



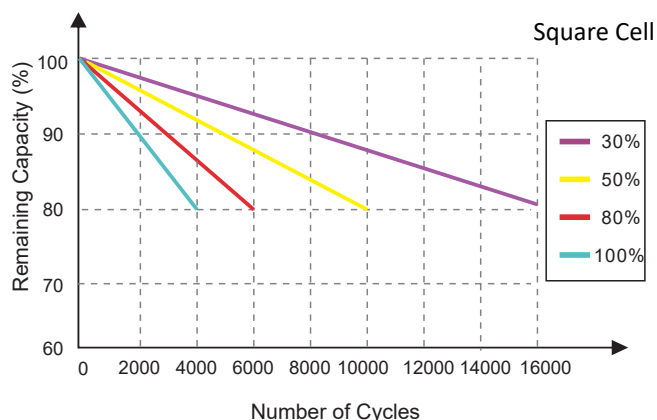
### State Of Charge Curve At 0.5c (25°C)



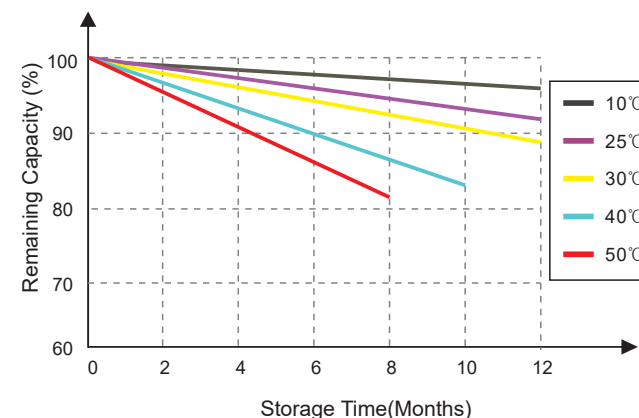
### Charging Characteristics At 0.5c (25°C)



### Cycle Life Curve At 1c According DoD



### Self Discharge Characteristics Curve



**SAFETY WARNING:** USE ONLY WITHIN THE ALLOWED PARAMETERS. Do not short circuit or over-load the battery. Charge only using an approved charger designed specifically to charge this battery. Do not heat above maximum temperatures indicated. Never crush, mutilate, puncture or abuse the battery. Do not dismantle the pack or disable any of the protective devices or circuits. DO NOT USE THE BATTERY IF YOU SUSPECT IT MAY BE FAULTY OR DAMAGED.

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