

# DATA SHEET | 12V 9Ah Lithium

## LP12V09

# LEADYO POWER

One-stop Lithium Battery Solution Manufacturer Since 2013

| Voltage: 12.8V | Capacity :9Ah | Energy: 115.2Wh

## LITHIUM IRON PHOSPHATE BATTERY LIFE

**Battery:** Deep cycle lithium iron phosphate

**BMS Solution:** MosFets / IC.

**Color:** Black or customized.

**Cycle Life:** >3000 cycles @ 70%DOD

**Very low self discharge:** (<3 % per month)

**Certification:** CE, RoHS, UN 38.3

**Flexible deployment :** up to 16 packs in parallel.

**Deep discharge:** allowed up to 100 %

**Excellent temperature range:** (-20 °C up to +60 °C)

**Bluetooth Monitoring:** Optional

About 50 % lighter and 40% smaller than equivalent Lead-AGM battery with same usable energy.

### Discharge/Charge Specifications

|                                  |                      |
|----------------------------------|----------------------|
| Max Continuous Discharge current | 10A                  |
| Peak Current                     | 10A (20s)            |
| Discharge Pluse Current          | 20A±2A (31±10ms)     |
| Discharge Cut-off Voltage        | 8.8V (2.2V±0.05v pc) |
| Max Charge Current               | 6A                   |
| Recommended Charge Current       | 1-2A                 |
| End of Charge voltage            | 14.4V±0.2V           |
| BMS Over Charge Voltage Cut-off  | 15V(3.75V±0.05v pc)  |

### Mechanical Specifications

|                                                                                                                        |                             |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Terminal Type                                                                                                          | F2                          |
| Weight                                                                                                                 | 1.2kg                       |
| Case Dimension (L*W*H)                                                                                                 | L151*W65*H94mm              |
| Case Material                                                                                                          | ABS case                    |
| Enclosure Protection                                                                                                   | IP66                        |
| Cell Type/Chemistry                                                                                                    | Cylindrical-LiFePO4 battery |
| BMS Functions:Low voltage ,high voltae,over temp ,over current,short-circuit protection, passive balance function,etc. |                             |

### Electrical Specifications

|                          |                                             |
|--------------------------|---------------------------------------------|
| Nominal Voltage          | 12.8V                                       |
| Rated Capacity           | 9Ah                                         |
| Energy                   | 115.2Wh                                     |
| Opetation Voltage        | 8.8V-14.4V                                  |
| Self Discharge           | 3% / per month                              |
| Efficiency               | 99%                                         |
| Max Module In Series     |                                             |
| Max Module In Parallel   | 20pcs                                       |
| Short Circuit Protection | 200-800µs<br>Auto recover or charge release |

### Temperature Specifiactions

|                                     |             |
|-------------------------------------|-------------|
| Discharge Temperature               | -20 ~ +65°C |
| Charge Temperature                  | -20 ~ +45°C |
| Storage Temperature Range           | -20 ~ +45°C |
| Battery High Temperature Protection | 60-65°C     |

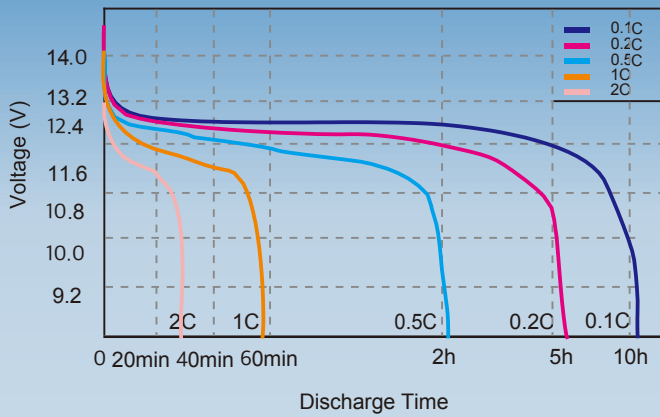
### Picture Specification



## PERFORMANCE CHARACTERISTICS

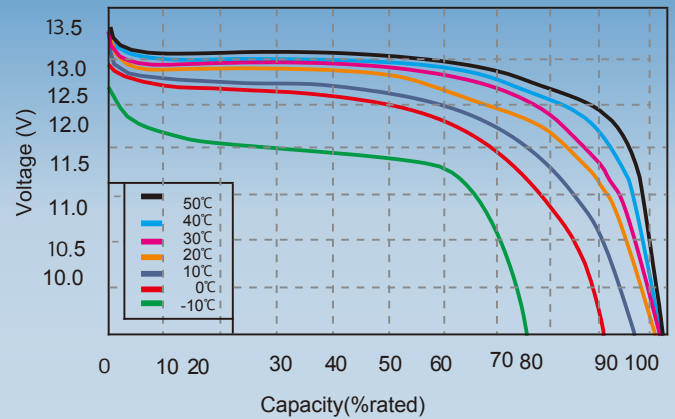
### Different Rate Discharge Curve

Different Rate Discharge Curve @25°C



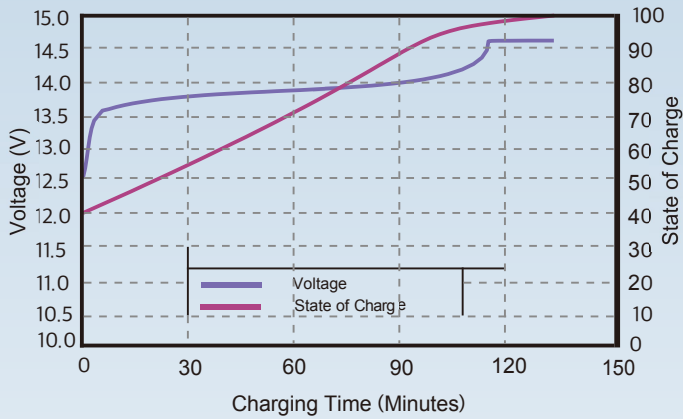
### Different Temperature Discharge Curve

Different Temperature Discharge Curve @0.5C



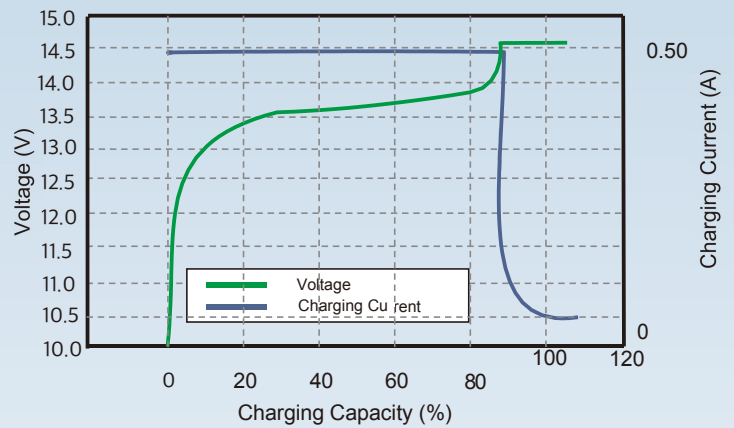
### State of Charge Curve

State of Charge Curve @0.5C 25°C



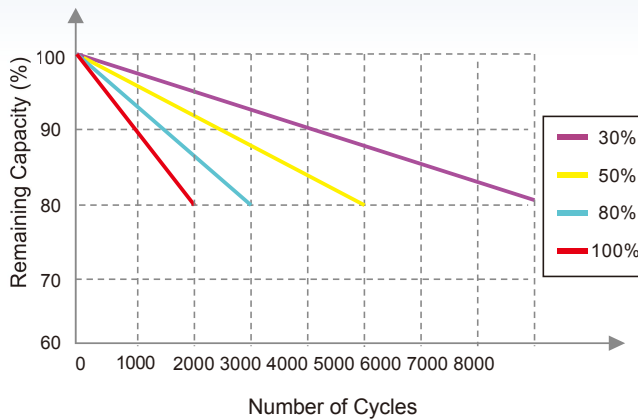
### Charging Characteristics

Charging Characteristics @0.5C 25°C



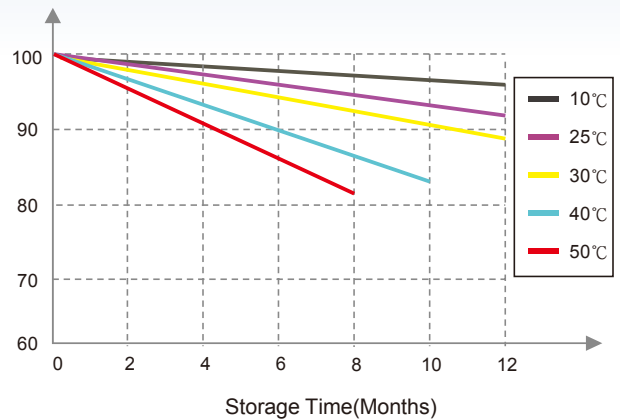
### Cycle Life Curve

Different DOD Discharge Cycle Life Curve @1C



### Self Discharge Characteristics Curve

Different Temperature Self Discharge Curve



MSDS UN38.3

