



# LP Series-General Purpose LP12-5.0(12V5.0Ah)

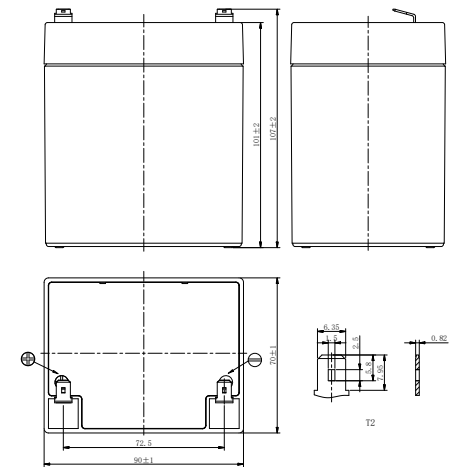


## Specifications

|                               |   |                                |
|-------------------------------|---|--------------------------------|
| Rated Voltage                 | 12V   |                                |
| Nominal Capacity              | 5.0Ah   | (C <sub>20</sub> , 1.75V/cell) |
| Dimension                     | Length  | 90±1mm (3.54 inches)           |
|                               | Width   | 70±1mm (2.76 inches)           |
|                               | Container Height  | 101±2mm (3.98 inches)          |
|                               | Total Height  | 107±2mm (4.21 inches)          |
| Approx Weight                 | 1.65 Kg (3.64 lbs)  |                                |
| Terminal                      | T2  |                                |
| Container Material            | ABS   |                                |
| Rated Capacity (25°C)         | 5.00 Ah   | (20hr, 0.250A, 1.75V/cell)     |
|                               | 4.73 Ah   | (10hr, 0.473A, 1.75V/cell)     |
|                               | 4.30 Ah   | (5hr, 0.860A, 1.75V/cell)      |
|                               | 3.81 Ah   | (3hr, 1.27A, 1.75V/cell)       |
|                               | 3.27 Ah   | (1hr, 3.27A, 1.60V/cell)       |
| Max. Discharge Current        | 75A (5s)  |                                |
| Internal Resistance (25°C)    | Approx 35mΩ   |                                |
| Operating Temp. Range         | Discharge   | -15 ~ 50°C (5 ~ 122°F)         |
|                               | Charge  | 0 ~ 40°C (32 ~ 104°F)          |
|                               | Storage   | -15 ~ 40°C (5 ~ 104°F)         |
| Nominal Operating Temp. Range | 25±3°C (77±5°F)   |                                |
| Cycle Use                     | Initial Charging Current less than 1.50A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C   |                                |
| Standby Use                   | Initial Charging Current less than 1.50A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C   |                                |
| Effect of temp. to Capacity   | 40°C (104°F)  | 103%                           |
|                               | 25°C (77°F)   | 100%                           |
|                               | 0°C (32°F)  | 86%                            |
| Self Discharge                | LP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. |                                |



## Layout



## Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h   | 20h   |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|-------|
| 1.85V/cell | 15.55 | 10.23 | 8.13  | 6.72  | 4.95  | 3.62  | 2.96 | 2.17 | 1.70 | 1.23 | 0.98 | 0.83 | 0.71 | 0.56 | 0.462 | 0.244 |
| 1.80V/cell | 16.72 | 10.85 | 8.53  | 6.99  | 5.10  | 3.71  | 3.03 | 2.21 | 1.74 | 1.25 | 0.99 | 0.85 | 0.73 | 0.57 | 0.468 | 0.247 |
| 1.75V/cell | 17.62 | 11.28 | 8.81  | 7.18  | 5.23  | 3.79  | 3.10 | 2.26 | 1.77 | 1.27 | 1.01 | 0.86 | 0.73 | 0.58 | 0.473 | 0.250 |
| 1.70V/cell | 18.45 | 11.74 | 9.11  | 7.39  | 5.37  | 3.88  | 3.15 | 2.29 | 1.79 | 1.29 | 1.02 | 0.87 | 0.74 | 0.58 | 0.478 | 0.252 |
| 1.67V/cell | 19.09 | 12.07 | 9.33  | 7.54  | 5.46  | 3.94  | 3.20 | 2.32 | 1.81 | 1.30 | 1.03 | 0.88 | 0.75 | 0.59 | 0.481 | 0.254 |
| 1.60V/cell | 20.25 | 12.58 | 9.65  | 7.77  | 5.61  | 4.04  | 3.27 | 2.37 | 1.85 | 1.33 | 1.05 | 0.89 | 0.76 | 0.60 | 0.487 | 0.257 |

## Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h   | 20h   |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|-------|
| 1.85V/cell | 29.42 | 19.48 | 15.57 | 12.95 | 9.56  | 7.01  | 5.76 | 4.24 | 3.34 | 2.42 | 1.93 | 1.65 | 1.41 | 1.12 | 0.918 | 0.489 |
| 1.80V/cell | 31.33 | 20.50 | 16.24 | 13.39 | 9.81  | 7.18  | 5.88 | 4.31 | 3.39 | 2.45 | 1.96 | 1.67 | 1.43 | 1.13 | 0.930 | 0.495 |
| 1.75V/cell | 32.65 | 21.17 | 16.67 | 13.69 | 10.02 | 7.31  | 5.98 | 4.38 | 3.44 | 2.49 | 1.98 | 1.69 | 1.45 | 1.14 | 0.938 | 0.500 |
| 1.70V/cell | 33.86 | 21.87 | 17.12 | 14.01 | 10.23 | 7.44  | 6.07 | 4.44 | 3.49 | 2.52 | 2.00 | 1.71 | 1.46 | 1.15 | 0.947 | 0.504 |
| 1.67V/cell | 34.74 | 22.36 | 17.49 | 14.27 | 10.39 | 7.54  | 6.15 | 4.49 | 3.52 | 2.54 | 2.02 | 1.72 | 1.48 | 1.16 | 0.954 | 0.508 |
| 1.60V/cell | 36.15 | 23.01 | 17.97 | 14.62 | 10.62 | 7.68  | 6.26 | 4.57 | 3.58 | 2.58 | 2.05 | 1.74 | 1.49 | 1.18 | 0.965 | 0.514 |



# LP Series-General Purpose

## LP12-5.0(12V5.0Ah)



### Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

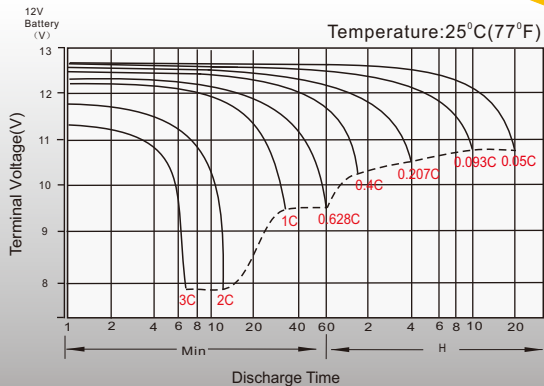
### General Features

- 5 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

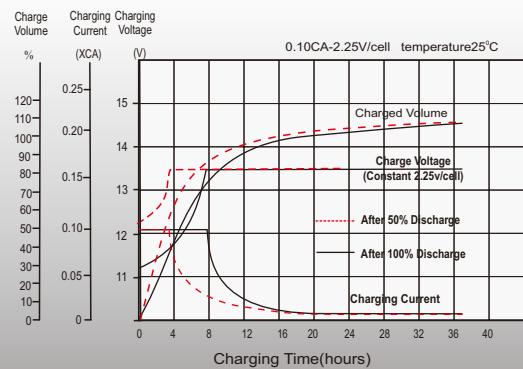
### Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF16949, ISO45001,ISO 9001 and ISO 14001 certified production facilities

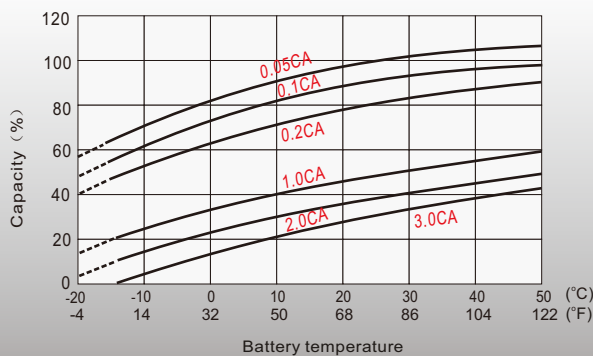
### Discharge Characteristics



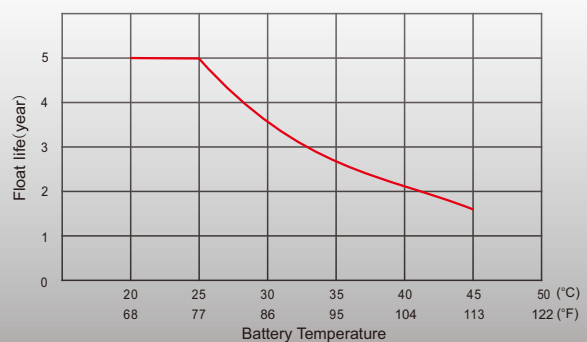
### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Effect of Temperature on Long Term Float Life



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