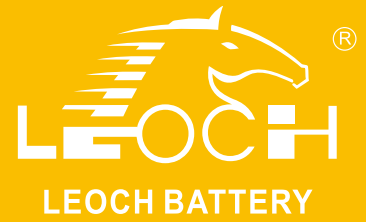




# LP Series-General Purpose LP12-5.0(12V5.0Ah)

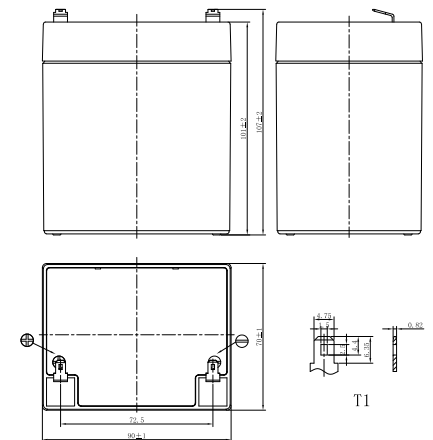


## Specifications

|                               |   |                                |
|-------------------------------|---|--------------------------------|
| 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                 | 1.80 Kg (3.96 lbs)  |                                |
| Terminal                      | T1/T2   |                                |
| Container Material            | ABS   |                                |
| Rated Capacity (25°C)         | 5.0 Ah  | (20hr, 0.270A, 1.80V/cell)     |
|                               | 5.11 Ah   | (10hr, 0.511A, 1.80V/cell)     |
|                               | 4.65 Ah   | (5hr, 0.929A, 1.75V/cell)      |
|                               | 4.14 Ah   | (3hr, 1.38A, 1.75V/cell)       |
|                               | 3.68 Ah   | (1hr, 3.68A, 1.60V/cell)       |
| Max. Discharge Current        | 81A (5s)  |                                |
| Internal Resistance (25°C)    | Approx 25mΩ   |                                |
| 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 1.62A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C   |                                |
|                               | Initial Charging Current less than 1.62A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C   |                                |
| Standby Use                   | Initial Charging Current less than 1.62A. 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)

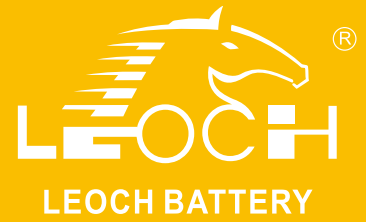
| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h   | 5h    | 6h    | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1.85V/cell | 17.9 | 12.7  | 9.79  | 7.96  | 5.76  | 4.14  | 3.33 | 2.40 | 1.85 | 1.33 | 1.06 | 0.905 | 0.775 | 0.610 | 0.499 | 0.264 |
| 1.80V/cell | 19.2 | 13.4  | 10.3  | 8.28  | 5.94  | 4.25  | 3.41 | 2.45 | 1.88 | 1.36 | 1.08 | 0.918 | 0.787 | 0.619 | 0.506 | 0.267 |
| 1.75V/cell | 20.3 | 14.0  | 10.6  | 8.51  | 6.09  | 4.34  | 3.48 | 2.49 | 1.92 | 1.38 | 1.09 | 0.929 | 0.796 | 0.626 | 0.511 | 0.270 |
| 1.70V/cell | 21.2 | 14.5  | 11.0  | 8.76  | 6.25  | 4.44  | 3.55 | 2.53 | 1.95 | 1.40 | 1.11 | 0.942 | 0.805 | 0.632 | 0.516 | 0.272 |
| 1.67V/cell | 22.0 | 15.0  | 11.2  | 8.94  | 6.36  | 4.51  | 3.60 | 2.57 | 1.97 | 1.41 | 1.12 | 0.950 | 0.812 | 0.637 | 0.520 | 0.274 |
| 1.60V/cell | 23.3 | 15.6  | 11.6  | 9.20  | 6.53  | 4.62  | 3.68 | 2.62 | 2.01 | 1.44 | 1.14 | 0.966 | 0.824 | 0.646 | 0.526 | 0.277 |

## 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 | 33.8 | 24.1  | 18.7  | 15.3  | 11.1  | 8.03  | 6.48 | 4.68 | 3.62 | 2.62 | 2.09 | 1.79 | 1.53 | 1.21 | 0.992 | 0.528 |
| 1.80V/cell | 36.0 | 25.4  | 19.5  | 15.9  | 11.4  | 8.22  | 6.62 | 4.76 | 3.68 | 2.66 | 2.12 | 1.81 | 1.55 | 1.23 | 1.00  | 0.534 |
| 1.75V/cell | 37.5 | 26.2  | 20.1  | 16.2  | 11.7  | 8.36  | 6.72 | 4.83 | 3.73 | 2.70 | 2.15 | 1.83 | 1.57 | 1.24 | 1.01  | 0.540 |
| 1.70V/cell | 38.9 | 27.1  | 20.6  | 16.6  | 11.9  | 8.52  | 6.83 | 4.91 | 3.78 | 2.73 | 2.17 | 1.85 | 1.59 | 1.25 | 1.02  | 0.544 |
| 1.67V/cell | 40.0 | 27.7  | 21.1  | 16.9  | 12.1  | 8.63  | 6.92 | 4.96 | 3.81 | 2.75 | 2.19 | 1.87 | 1.60 | 1.26 | 1.03  | 0.549 |
| 1.60V/cell | 41.6 | 28.5  | 21.6  | 17.3  | 12.4  | 8.79  | 7.04 | 5.04 | 3.88 | 2.80 | 2.22 | 1.89 | 1.62 | 1.28 | 1.04  | 0.555 |



# 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

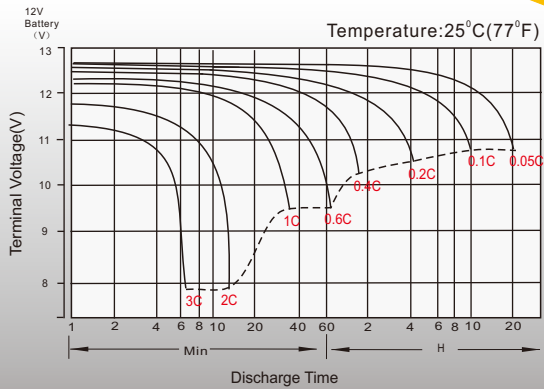
## General Features

- 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

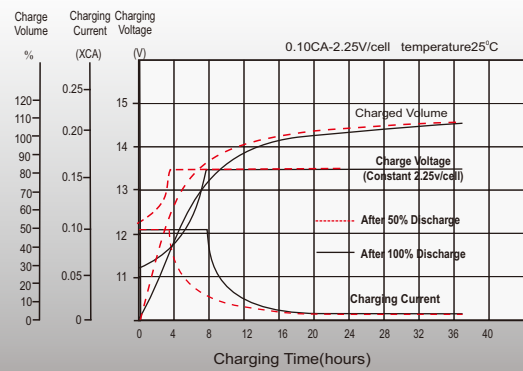
## Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF 16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities

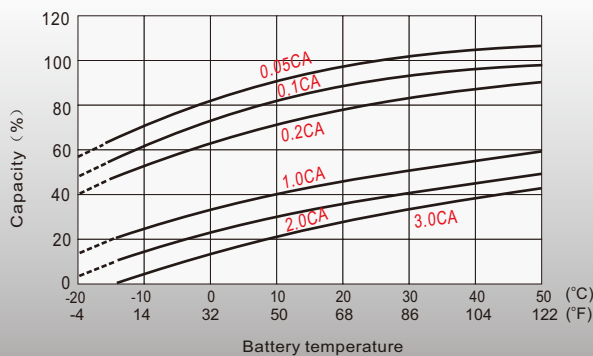
## Discharge Characteristics



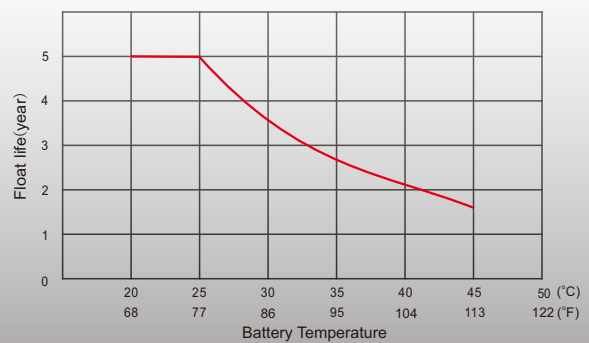
## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Float Service Life



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Publication No.: LB-LP12-5.4-PD-EN-V2.0-202004