# LP SERIES- General Purpose

## 491460265 [12V 40Ah]

## Specification

| | | |
|---|---|---|
| Nomial Voltage | 12V | |
| Nomial Capacity(10HR) | 40.0AH | |
| Dimension | Length | 197 ± 2mm |
| | Width | 165 ± 1mm |
| | Container Height | 170 ± 2mm |
| | Total Height (with Terminal) | 170 ± 2mm |
| Approx Weight | Approx 13.2 kg (28.67lbs) | |
| Terminal | T7 | |
| Container Material | ABS | |
| Rated Capacity | 41.6 AH/4.08A | (20hr ,1.80V/cell,25°C/77°F) |
| | 40.0 AH/4.00A | (10hr,1.80V/cell,25°C/77°F) |
| | 31.5 AH/6.89A | (5hr,1.75V/cell,25°C/77°F) |
| | 31.2 AH/10.4A | (3hr,1.75V/cell,25°C/77°F) |
| | 24.4 AH/24.4A | (1hr,1.60V/cell,25°C/77°F) |
| Max. Discharge Current | 480A (5s) | |
| Internal Resistance | Approx 9mΩ | |
| Operating Temp.Range | Discharge : -15~50°C (5~122°F)<br>Charge : 0~40°C (32~104°F)<br>Storage : -15~40°C (5~104°F) | |
| Nominal Operating Temp. Range | 25±3°C (77±5°F ) | |
| Cycle Use | Initial Charging Current less than 12.0A.Voltage<br>14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C | |
| Standby Use | No limit on Initial Charging Current Voltage<br>13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C | |
| Capacity affected by Temperature | 40°C (104°F) | 103% |
| | 25°C ( 77°F) | 100% |
| | 0°C ( 32°F) | 86% |
| Self Discharge | Leoch 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. | |


## Applications

- *All purpose*
- *Uninterruptable Power Supply (UPS)*
- *Electric Power System (EPS)*
- *Emergency backup power supply*
- *Emergency light*
- *Railway signal*
- *Aircraft signal*
- *Alarm and security system*
- *Electronic apparatus and equipment*
- *Communication power supply*
- *DC power supply*
- *Auto control system*

VdS | Intertek ETL SEMKO MH26856 | ISO14001 | ISO9001 | CE EMC

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

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 68.5 | 53.8 | 45.8 | 38.3 | 30.4 | 23.0 | 18.9 | 12.0 | 9.50 | 7.76 | 6.25 | 5.44 | 4.42 | 3.78 | 2.06 |
| 1.80V/cell | 91.9 | 68.8 | 55.3 | 45.3 | 35.9 | 26.8 | 21.1 | 13.1 | 10.2 | 8.28 | 6.72 | 5.84 | 4.69 | 4.00 | 2.08 |
| 1.75V/cell | 103.6 | 75.6 | 60.4 | 48.7 | 37.3 | 27.8 | 22.1 | 13.6 | 10.4 | 8.47 | 6.88 | 6.00 | 4.77 | 4.04 | 2.10 |
| 1.70V/cell | 114.1 | 82.4 | 64.5 | 51.2 | 38.8 | 28.9 | 22.8 | 14.1 | 10.7 | 8.69 | 7.06 | 6.12 | 4.84 | 4.08 | 2.14 |
| 1.65V/cell | 125.8 | 88.9 | 68.6 | 54.4 | 40.9 | 29.6 | 23.6 | 14.5 | 11.2 | 8.99 | 7.26 | 6.26 | 4.91 | 4.16 | 2.17 |
| 1.60V/cell | 138.8 | 96.5 | 73.3 | 57.9 | 43.2 | 30.9 | 24.4 | 15.0 | 11.5 | 9.27 | 7.50 | 6.40 | 4.96 | 4.21 | 2.18 |

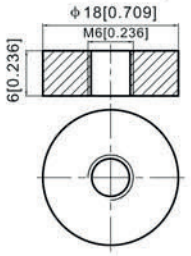
## Constant Power Discharge (Watts) at 25°C (77°F)

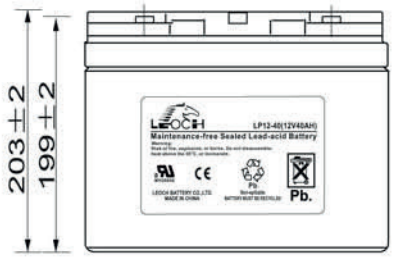
| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 125.2 | 99.4 | 85.4 | 72.2 | 58.0 | 44.3 | 36.4 | 23.3 | 18.5 | 15.2 | 12.3 | 10.7 | 8.73 | 7.47 | 4.08 |
| 1.80V/cell | 166.2 | 125.5 | 101.8 | 84.1 | 67.4 | 51.1 | 40.5 | 25.3 | 19.8 | 16.1 | 13.1 | 11.4 | 9.23 | 7.90 | 4.11 |
| 1.75V/cell | 183.4 | 135.7 | 109.8 | 89.6 | 69.4 | 52.5 | 42.2 | 26.1 | 20.1 | 16.4 | 13.4 | 11.7 | 9.36 | 7.97 | 4.15 |
| 1.70V/cell | 196.4 | 144.6 | 115.6 | 93.4 | 71.8 | 54.4 | 43.4 | 27.1 | 20.6 | 16.8 | 13.7 | 11.9 | 9.49 | 8.05 | 4.23 |
| 1.65V/cell | 213.5 | 154.6 | 122.0 | 98.5 | 75.1 | 55.3 | 44.5 | 27.7 | 21.4 | 17.3 | 14.0 | 12.2 | 9.61 | 8.20 | 4.28 |
| 1.60V/cell | 230.0 | 164.0 | 128.3 | 103.8 | 78.8 | 57.3 | 45.9 | 28.5 | 22.0 | 17.8 | 14.5 | 12.4 | 9.69 | 8.27 | 4.29 |

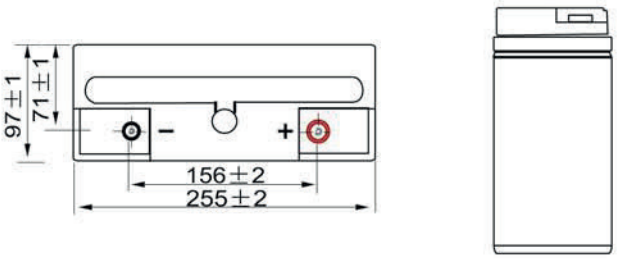
## Dimensions

**T7 Terminal**

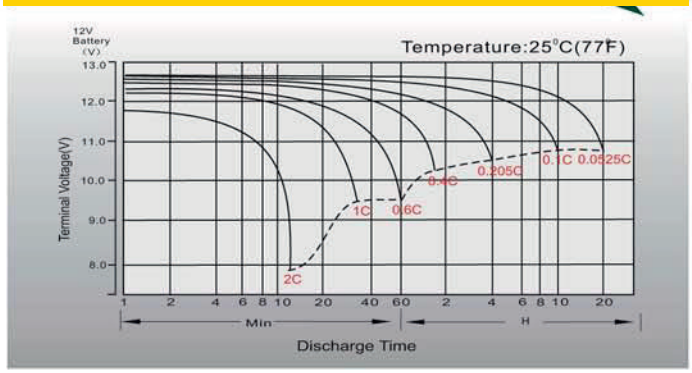
Unit: mm [inches]



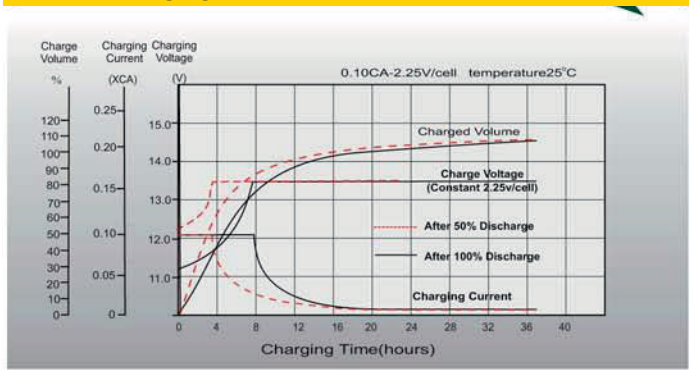



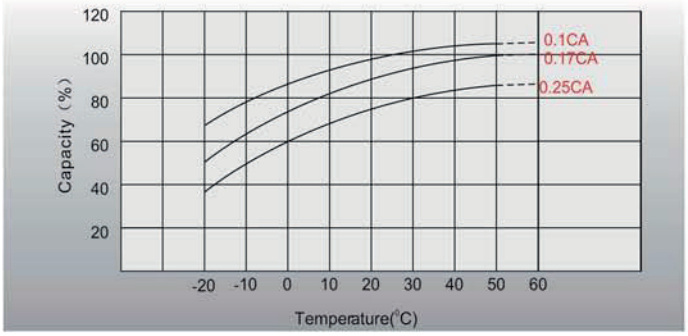

## Discharge Characteristics



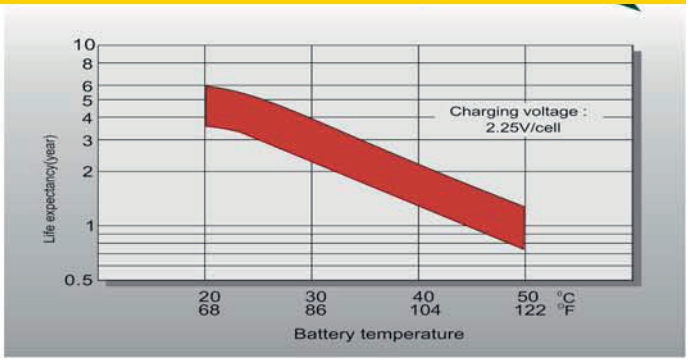

## Float Charging Characteristics



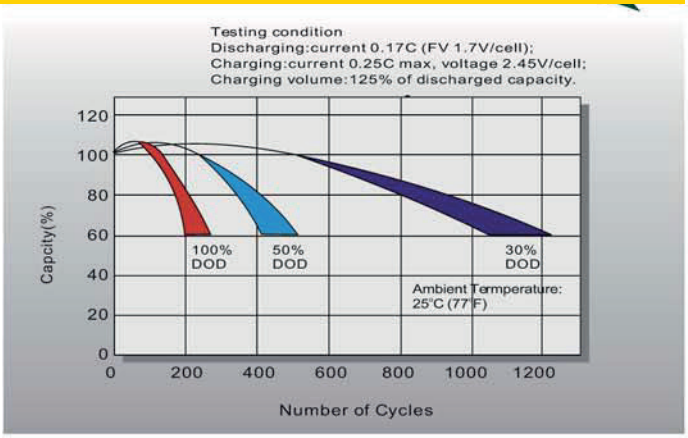

## Temperature Effects in Relation to Battery Capacity



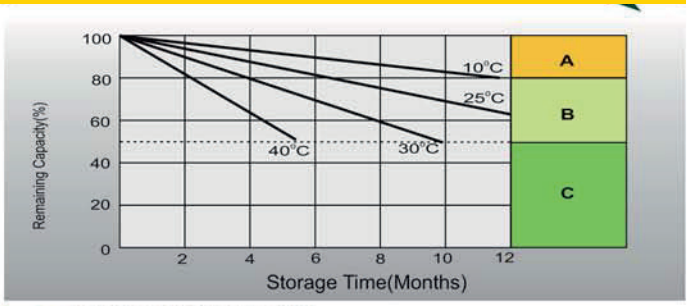

## Effect of Temperature on Long Term Float Life




## Cycle Life in Relation to Depth of Discharge




## Self Discharge Characteristics




**A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

**B** Supplementary charge required before use.Optional charging way as below:
1.Charged for above 3 days at limted current 0.25CA and constant volatge 2.25V/cell.
2.Charged for above 20hours at limted current 0.25CA and constant volatge 2.45V/cell.
3.Charged for 8~10hours at limted current 0.05CA .

**C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.