

# LT SERIES-General Purpose

## 12LT100 (12V100AH)



### Specification

|                                  |   |                               |
|----------------------------------|---|-------------------------------|
| Nominal Voltage                  | 12V   |                               |
| Nominal Capacity(10HR)           | 100.0AH   |                               |
| Dimension                        | Length  | 329 ± 3mm (12.95 inches)      |
|                                  | Width   | 172 ± 2mm (6.77 inches)       |
|                                  | Container Height  | 210 ± 2mm (8.26 inches)       |
|                                  | Total Height (with Terminal)  | 218 ± 2mm (8.58 inches)       |
| Approx Weight                    | Approx 29.0 kg (63.95lbs)   |                               |
| Terminal                         | T11   |                               |
| Container Material               | ABS   |                               |
| Rated Capacity                   | 104.0 AH/5.20A  | 20hr , 1.80V/cell, 25°C/77°F) |
|                                  | 100.0 AH/10.0A  | (10hr, 1.80V/cell, 25°C/77°F) |
|                                  | 88.0 AH/17.6A   | (5hr, 1.75V/cell, 25°C/77°F)  |
|                                  | 76.2 AH/25.4A   | (3hr, 1.75V/cell, 25°C/77°F)  |
|                                  | 65.1 AH/65.1A   | (1hr, 1.60V/cell, 25°C/77°F)  |
| Max. Discharge Current           | 1200A (5s)  |                               |
| Internal Resistance              | Approx 4.9mΩ  |                               |
| 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 30.0A. Voltage   |                               |
|                                  | 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C   |                               |
| Standby Use                      | No limit on Initial Charging Current Voltage  |                               |
|                                  | 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                   | LT 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



### 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 | 208.8 | 161.4 | 136.4 | 117.0 | 88.4  | 65.7  | 53.0 | 31.3 | 23.5 | 19.2 | 16.4 | 14.4 | 11.6 | 9.65 | 5.13 |
| 1.80V/cell | 246.0 | 180.0 | 150.8 | 126.6 | 94.2  | 69.6  | 55.9 | 33.1 | 24.6 | 20.2 | 17.2 | 15.0 | 12.0 | 10.0 | 5.20 |
| 1.75V/cell | 278.4 | 197.4 | 162.0 | 134.7 | 99.0  | 72.7  | 58.0 | 34.4 | 25.4 | 20.7 | 17.6 | 15.3 | 12.2 | 10.1 | 5.29 |
| 1.70V/cell | 318.0 | 214.8 | 174.4 | 143.4 | 104.6 | 76.0  | 60.4 | 35.3 | 26.0 | 21.2 | 17.9 | 15.6 | 12.4 | 10.2 | 5.34 |
| 1.65V/cell | 356.4 | 232.2 | 185.6 | 151.5 | 110.0 | 79.2  | 63.0 | 36.3 | 26.7 | 21.7 | 18.3 | 15.9 | 12.6 | 10.3 | 5.40 |
| 1.60V/cell | 405.6 | 254.4 | 197.2 | 159.9 | 115.8 | 82.4  | 65.1 | 37.5 | 27.6 | 22.2 | 18.6 | 16.2 | 12.7 | 10.5 | 5.45 |

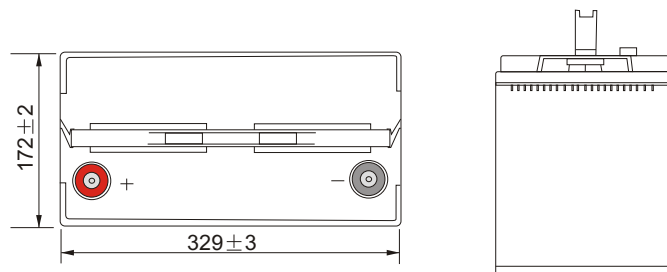
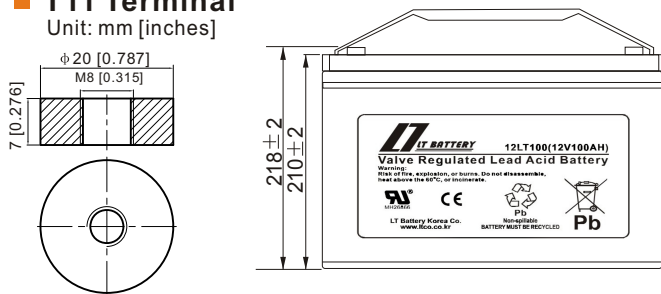
### Constant Power Discharge (Watts) at 25 °C (77°F)

| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h    | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h   |
|------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|-------|
| 1.85V/cell | 381.8 | 298.1 | 254.5 | 220.5 | 168.5 | 126.4 | 102.2 | 60.8 | 45.7 | 37.5 | 32.2 | 28.2 | 22.9 | 19.1 | 10.15 |
| 1.80V/cell | 445.0 | 328.6 | 277.6 | 235.1 | 176.8 | 132.7 | 107.2 | 63.8 | 47.7 | 39.2 | 33.6 | 29.4 | 23.7 | 19.8 | 10.29 |
| 1.75V/cell | 492.9 | 354.6 | 294.6 | 247.8 | 184.3 | 137.3 | 110.8 | 66.0 | 49.1 | 40.1 | 34.3 | 29.9 | 24.0 | 19.9 | 10.45 |
| 1.70V/cell | 547.4 | 377.1 | 312.7 | 261.8 | 193.6 | 143.0 | 115.0 | 67.6 | 50.1 | 41.0 | 34.8 | 30.4 | 24.3 | 20.1 | 10.54 |
| 1.65V/cell | 604.8 | 403.9 | 330.2 | 274.5 | 201.9 | 147.7 | 119.1 | 69.2 | 51.3 | 41.8 | 35.3 | 30.8 | 24.6 | 20.3 | 10.64 |
| 1.60V/cell | 672.4 | 432.4 | 345.1 | 286.6 | 211.1 | 152.9 | 122.4 | 71.1 | 52.7 | 42.6 | 35.9 | 31.3 | 24.8 | 20.5 | 10.73 |

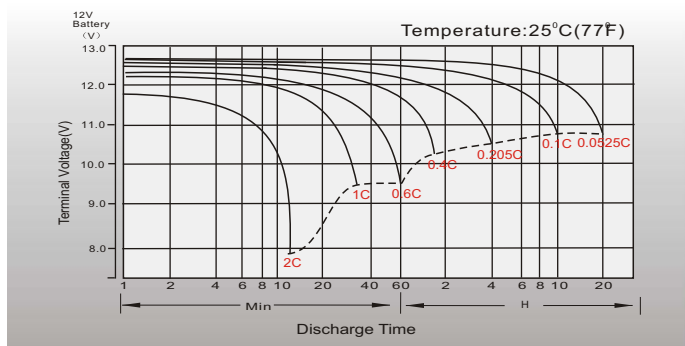
## Dimensions

### T11 Terminal

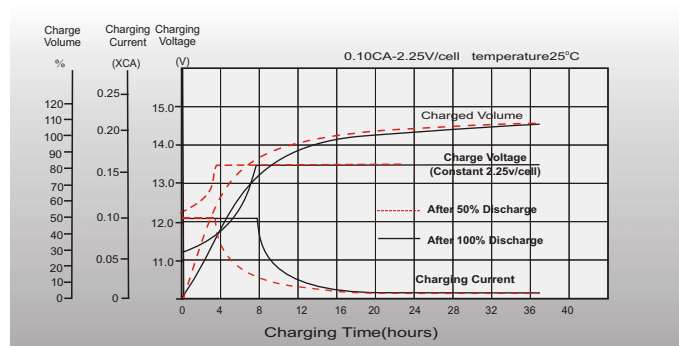
Unit: mm [inches]



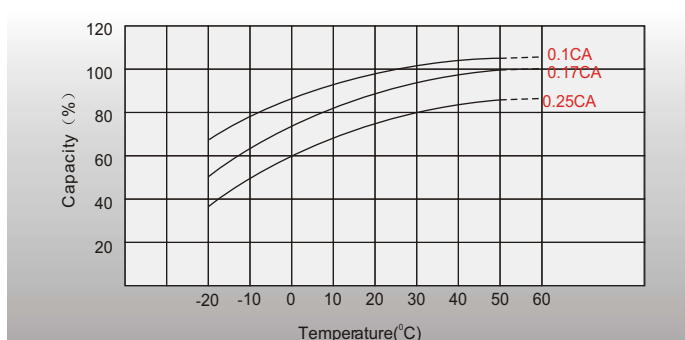
## Discharge Characteristics



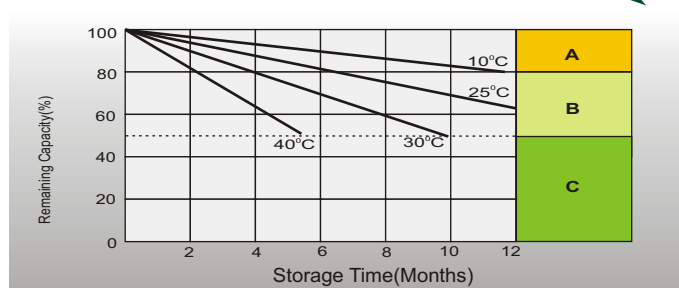
## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Self Discharge Characteristics

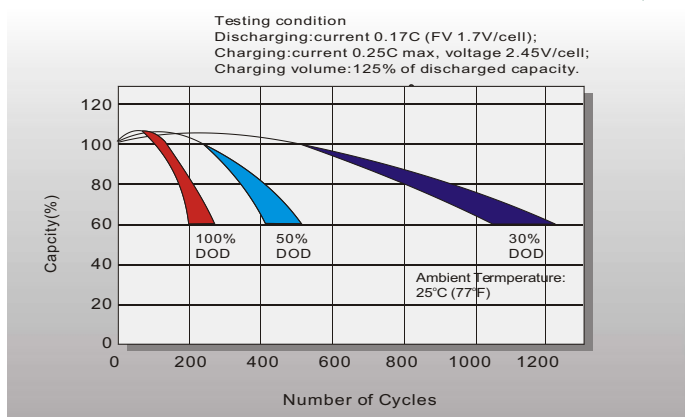


**A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)

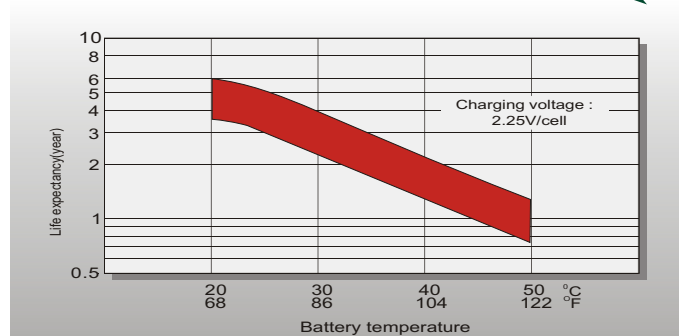
**B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current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

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

## Cycle Life in Relation to Depth of Discharge



## Effect of Temperature on Long Term Float Life



ISO 9001 : 2008

Pooya Tosee Afzar Co.

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