



# NP38-12D (12V38Ah/10hr)

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and thus immobilized.

Should the battery be accidentally overcharged producing hydrogen and oxygen, Special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

## Battery Construction

|              |                |                |           |       |              |          |            |               |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Component    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
| Raw material | Lead dioxide   | Lead           | ABS       | ABS   | Rubber       | Copper   | Fiberglass | Sulfuric acid |

## General Feature

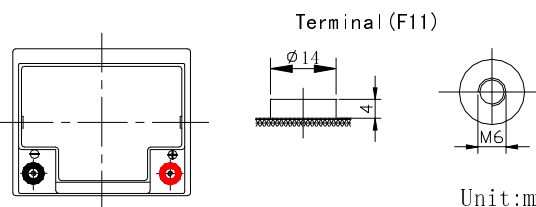
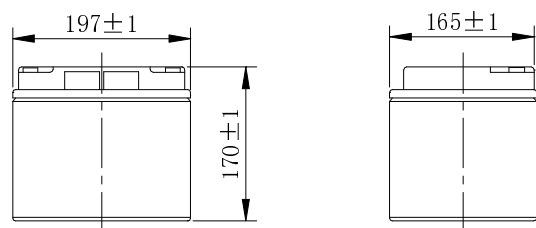
- Absorbent Glass Mat(AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

## Performance Characteristics

|   |   |      |
|---|---|------|
| Capacity<br>77°F(25°C)                          | 20 hour rate (2.1A、10.8V)                         | 42Ah |
|   | 10 hour rate (4A、10.5V)                           | 40Ah |
|   | 5 hour rate (6.8A、10.5V)                          | 34Ah |
|   | 1 hour rate (25A、9.6V)                            | 25Ah |
| Internal Resistance                             | Full charged Battery77°F(25°C):10mΩ               |      |
| Capacity affected by Temperature (10 hour rate) | 104° F(40°C)                                      | 102% |
|   | 77° F(25°C)                                       | 100% |
|   | 32° F(10°C)                                       | 85%  |
|   | 5° F(-15°C)                                       | 65%  |
| Self-Discharge<br>68°F(20°C)                    | Capacity after 3 month storage                    | 90%  |
|   | Capacity after 6 month storage                    | 80%  |
|   | Capacity after 12month storage                    | 60%  |
| Max. discharge current77°F(25°C): 400A(5S)      |   |      |
| Charge (Constant Voltage)                       | Float: 13.6~13.8 V/77° F(25°C)                    |      |
|   | Cycle:14.4~14.7 V/77°F(25°C)<br>Max. Current: 10A |      |

## SPECIFICATION

Nominal voltage ..... 12V  
 Number of cell ..... 6  
 Length(mm/inch) ..... 197/7.76  
 Width(mm/inch) ..... 165/6.5  
 Height(mm/inch) ..... 170/6.69  
 Total Height(mm/inch) ..... 170/6.69  
 Approx. Weight(kg/lbs) ..... 11.2/27.5



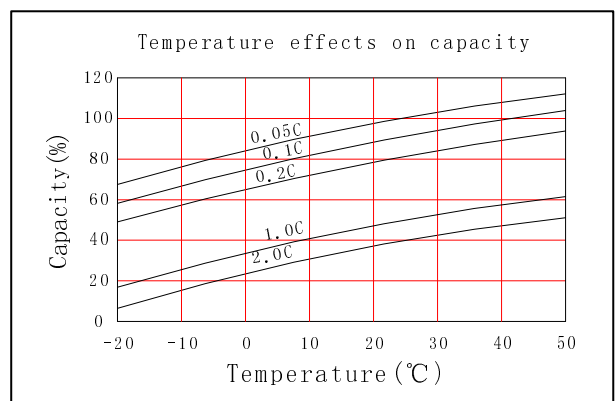
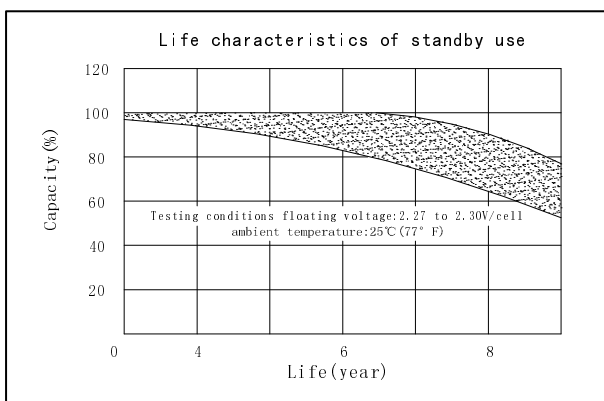
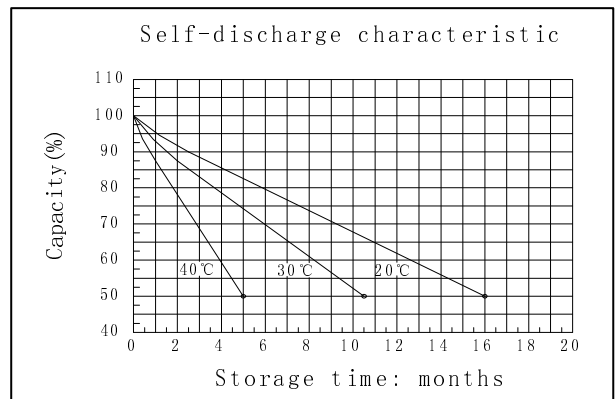
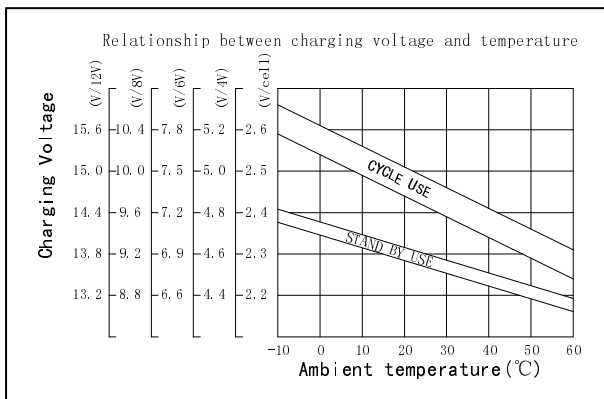
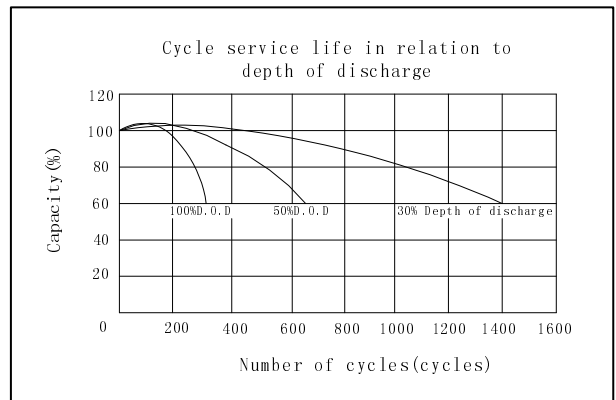
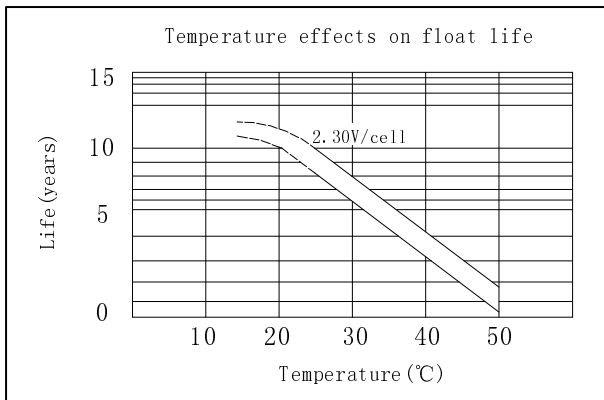
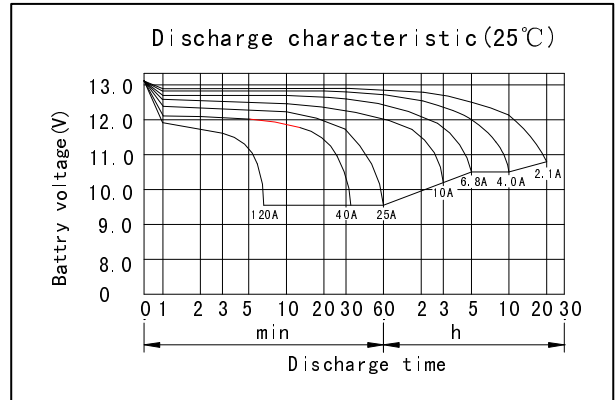
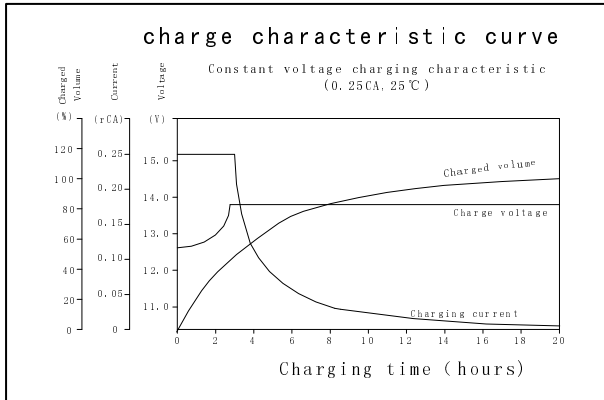
Discharge Constant Current (Amperes at 77° F 25 °C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h  | 20h  |
|----------------------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V                | 130  | 92.0  | 72.0  | 42.0  | 25.0 | 10.2 | 7.00 | 4.14 | 2.18 |
| 1.65V                | 123  | 87.4  | 69.3  | 40.7  | 24.2 | 10.1 | 6.90 | 4.09 | 2.17 |
| 1.70V                | 118  | 82.7  | 66.5  | 39.1  | 23.3 | 10.0 | 6.85 | 4.05 | 2.15 |
| 1.75V                | 109  | 78.1  | 63.2  | 37.2  | 22.1 | 9.85 | 6.80 | 4.00 | 2.13 |
| 1.80V                | 100  | 71.0  | 58.0  | 34.9  | 20.8 | 9.71 | 6.70 | 3.95 | 2.10 |

Discharge Constant Power (watts at 77° F 25 °C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V                | 232  | 155   | 113   | 69.4  | 54.2  | 44.5 | 28.5 | 19.3 | 13.7 |
| 1.65V                | 218  | 146   | 107   | 65.9  | 51.7  | 42.6 | 27.6 | 18.8 | 13.5 |
| 1.70V                | 203  | 137   | 101   | 62.3  | 49.1  | 40.7 | 26.7 | 18.3 | 13.2 |
| 1.75V                | 189  | 128   | 94.0  | 58.7  | 46.5  | 38.7 | 25.6 | 17.7 | 12.9 |
| 1.80V                | 175  | 119   | 88.1  | 55.1  | 43.8  | 36.6 | 24.5 | 17.1 | 12.6 |

(Note)The above characteristics data are average values obtained Within three charge/discharge cycles not the minimum values.



**Shenzhen Leadhoo Battery Co.,Ltd**  
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