

## NP55-12D (12V55Ah/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

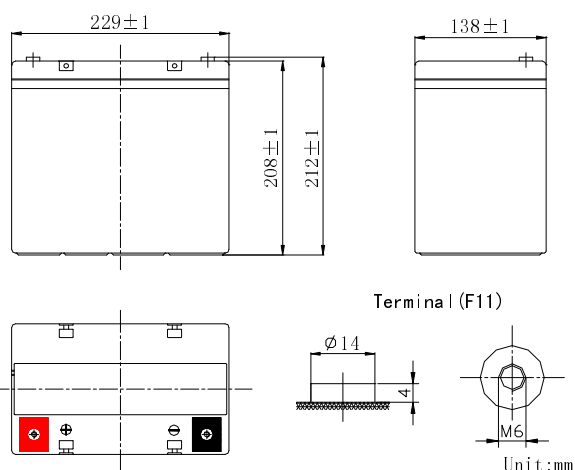
| Component    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead           | 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.

## SPECIFICATION

|                        |       |           |
|------------------------|-------|-----------|
| Nominal voltage        | ..... | 12V       |
| Number of cell         | ..... | 6         |
| Length(mm/inch)        | ..... | 229/9.01  |
| Width(mm/inch)         | ..... | 138/5.43  |
| Height(mm/inch)        | ..... | 208/8.30  |
| Total Height(mm/inch)  | ..... | 212/8.35  |
| Approx. Weight(kg/lbs) | ..... | 14.1/33.1 |



## Performance Characteristics

|                                                 |                                                     |        |
|-------------------------------------------------|-----------------------------------------------------|--------|
| Capacity<br>77°F(25°C)                          | 20 hour rate (2.9A、10.8V)                           | 58Ah   |
|                                                 | 10 hour rate (5.5A、10.8V)                           | 55Ah   |
|                                                 | 5 hour rate (9.6A、10.5V)                            | 48Ah   |
|                                                 | 1 hour rate (35.2A、9.6V)                            | 35.2Ah |
| Internal Resistance                             | Full charged Battery77°F(25°C):8mΩ                  |        |
| 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): 550A(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: 13.8A |        |

Discharge Constant Current (Amperes at 77° F25 °C)

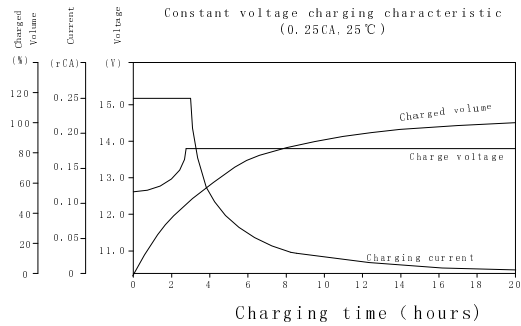
| End Point<br>Volts/Cell | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h  | 20h  |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V                   | 172  | 130   | 98.0  | 58.2  | 35.2 | 14.5 | 9.98 | 5.66 | 2.95 |
| 1.65V                   | 162  | 123   | 94.0  | 56.5  | 34.4 | 14.3 | 9.88 | 5.63 | 2.94 |
| 1.70V                   | 152  | 115   | 89.5  | 54.5  | 33.6 | 14.0 | 9.75 | 5.59 | 2.93 |
| 1.75V                   | 141  | 108   | 84.4  | 52.9  | 32.7 | 13.7 | 9.60 | 5.55 | 2.92 |
| 1.80V                   | 128  | 100   | 50.5  | 51.0  | 31.6 | 13.4 | 9.43 | 5.50 | 2.90 |

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

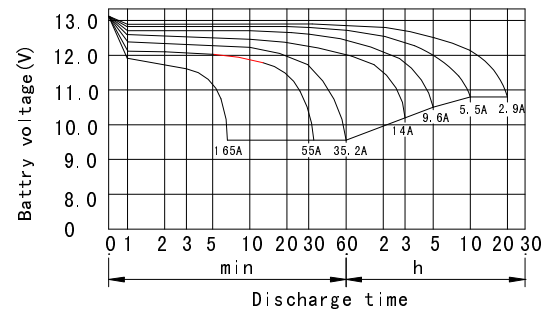
| End Point<br>Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |
|-------------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V                   | 330  | 247   | 191   | 115   | 88.4  | 71.4 | 42.5 | 30.1 | 19.4 |
| 1.65V                   | 310  | 233   | 183   | 113   | 87.1  | 69.8 | 41.7 | 29.5 | 19.3 |
| 1.70V                   | 291  | 220   | 176   | 111   | 85.3  | 68.2 | 40.8 | 28.9 | 18.8 |
| 1.75V                   | 271  | 207   | 168   | 109   | 83.4  | 66.6 | 39.8 | 28.3 | 18.7 |
| 1.80V                   | 257  | 192   | 159   | 107   | 81.2  | 64.9 | 38.8 | 27.7 | 18.5 |

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

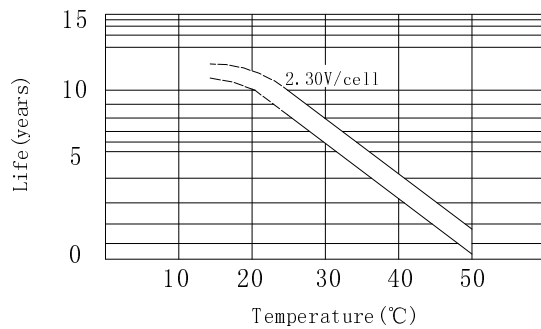
charge characteristic curve



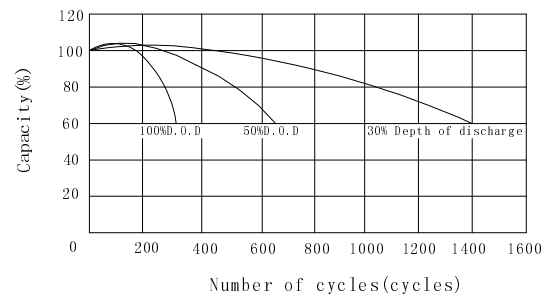
Discharge characteristic (25°C)



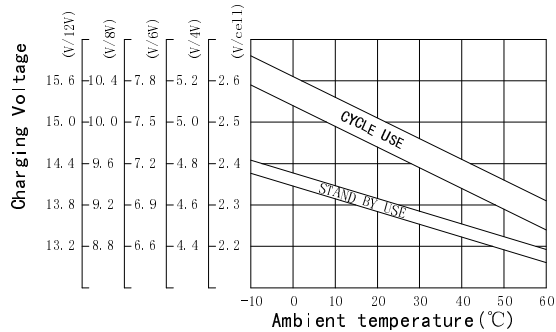
Temperature effects on float life



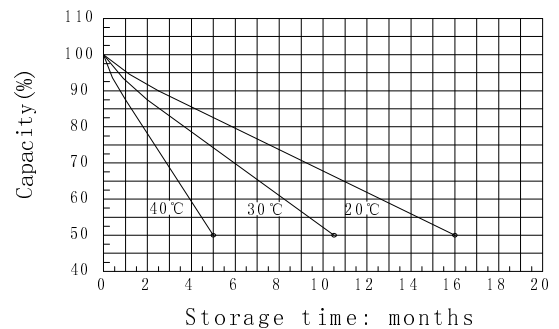
Cycle service life in relation to depth of discharge



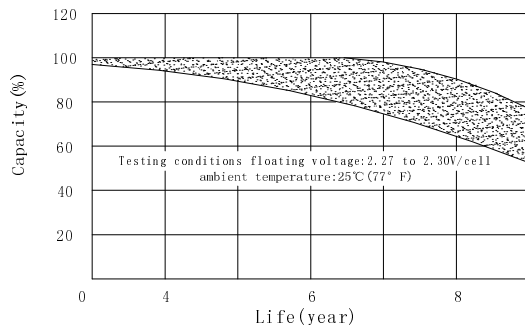
Relationship between charging voltage and temperature



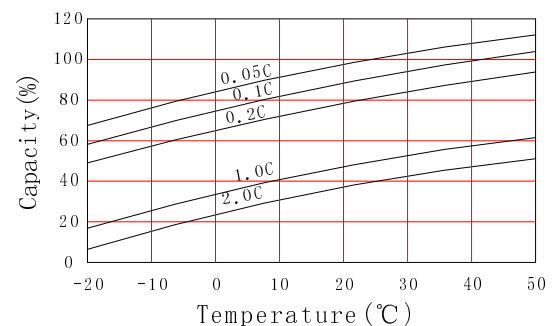
Self-discharge characteristic



Life characteristics of standby use



Temperature effects on capacity



Shenzhen Leadhoo Battery Co., Ltd

[www.leadhoo.com](http://www.leadhoo.com)

