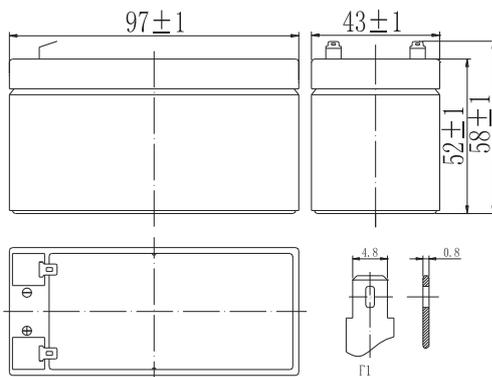


## SL12-1.3(12V1.3Ah)



### Dimensions



### Specifications

|   |              |   |
|---|--------------|---|
| Nominal Voltage                           |              | 12 V  |
| Capacity (25°C)                           | 20HR(10.5V)  | 1.3Ah   |
|   | 10HR(10.5V)  | 1.2Ah   |
|   | 1HR(9.60V)   | 0.85Ah  |
| Dimension                                 | Length       | 97± 1mm (3.82inch)                                    |
|   | Width        | 43± 1mm (1.69inch)                                    |
|   | Height       | 52± 1mm (2.05inch)                                    |
|   | Total Height | 58± 1mm (2.28inch)                                    |
| Approx. Weight                            |              | 0.53kg (1.17lbs)± 5%                                  |
| Terminal type                             |              | F1  |
| Internal resistance (Fully charged, 25°C) |              | Approx. 95mΩ  |
| Capacity affected by temperature (20HR)   | 40°C         | 102%  |
|   | 25°C         | 100%  |
|   | 0°C          | 85%   |
|   | -15°C        | 65%   |
| Self-discharge (25°C)                     | 3 month      | Remaining Capacity: 91%                               |
|   | 6 month      | Remaining Capacity: 82%                               |
|   | 12 month     | Remaining Capacity: 65%                               |
| Nominal operating temperature             |              | 25°C± 3°C(77°F± 5°F)                                  |
| Operating temperature range               | Discharge    | -15°C~50°C(5°F~122°F)                                 |
|   | Charge       | -10°C~50°C(14°F~122°F)                                |
|   | Storage      | -20°C~50°C(-4°F~122°F)                                |
| Float charging voltage(25°C)              |              | 13.60 to 13.80V<br>Temperature compensation: -18mV/°C |
| Cyclic charging voltage(25°C)             |              | 14.50 to 15.00V<br>Temperature compensation: -30mV/°C |
| Maximum charging current                  |              | 0.36A   |
| Maximum discharge current                 |              | 18A(5 sec.)   |
| Designed floating life(20°C)              |              | 5 years   |

### Constant Current Discharge Characteristics (A,25°C)

| F.V/TIME | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 4.96 | 3.14  | 2.46  | 1.39  | 0.86  | 0.47 | 0.32 | 0.27 | 0.23 | 0.12 | 0.06 |
| 9.90V    | 4.82 | 3.05  | 2.39  | 1.35  | 0.83  | 0.47 | 0.32 | 0.26 | 0.23 | 0.12 | 0.06 |
| 10.2V    | 4.61 | 2.92  | 2.31  | 1.31  | 0.81  | 0.45 | 0.31 | 0.26 | 0.23 | 0.12 | 0.06 |
| 10.5V    | 4.42 | 2.79  | 2.23  | 1.28  | 0.80  | 0.45 | 0.31 | 0.26 | 0.23 | 0.12 | 0.06 |
| 10.8V    | 4.17 | 2.64  | 2.11  | 1.23  | 0.78  | 0.44 | 0.30 | 0.25 | 0.22 | 0.12 | 0.06 |

### Constant Power Discharge Characteristics (Watt,25°C)

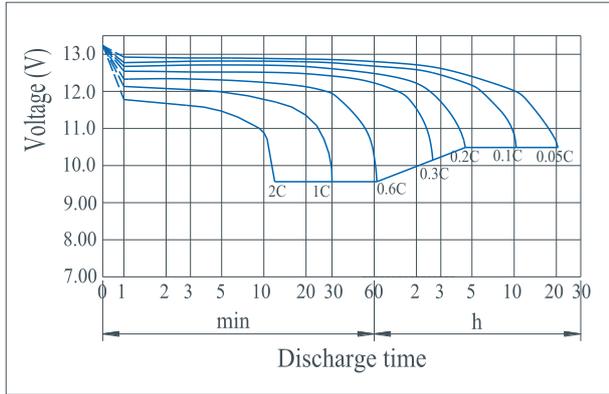
| F.V/TIME | 5min  | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 55.45 | 35.52 | 28.05 | 15.81 | 9.86  | 5.45 | 3.82 | 3.17 | 2.71 | 1.47 | 0.79 |
| 9.90V    | 53.72 | 34.44 | 27.29 | 15.60 | 9.71  | 5.42 | 3.80 | 3.15 | 2.69 | 1.47 | 0.79 |
| 10.2V    | 51.55 | 33.03 | 26.32 | 15.05 | 9.47  | 5.37 | 3.78 | 3.13 | 2.68 | 1.46 | 0.78 |
| 10.5V    | 49.28 | 31.62 | 25.45 | 14.73 | 9.27  | 5.29 | 3.75 | 3.11 | 2.65 | 1.45 | 0.78 |
| 10.8V    | 46.57 | 29.78 | 24.04 | 14.19 | 8.99  | 5.16 | 3.64 | 3.02 | 2.58 | 1.43 | 0.77 |

Note: The above characteristics data can be obtained within three charge/discharge cycles.

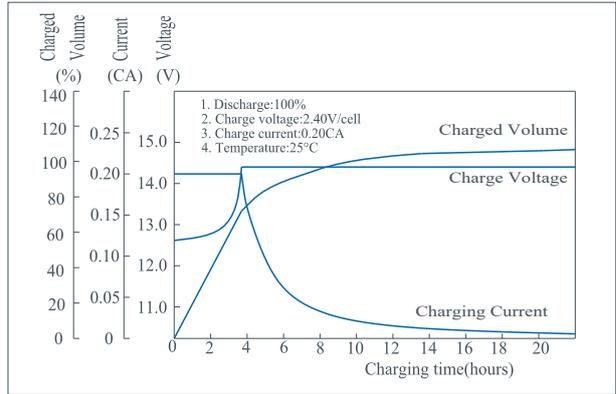
### Construction

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

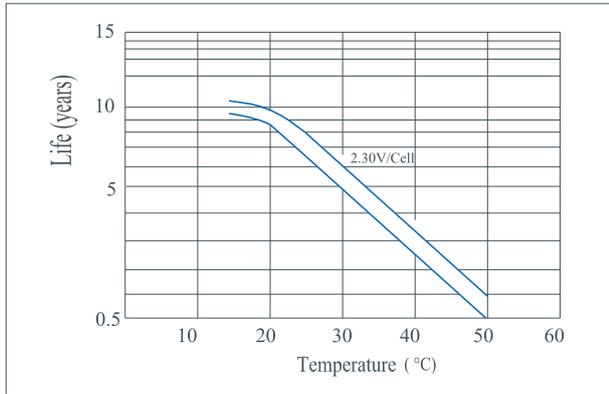
## Disch Characteristics(25°C)



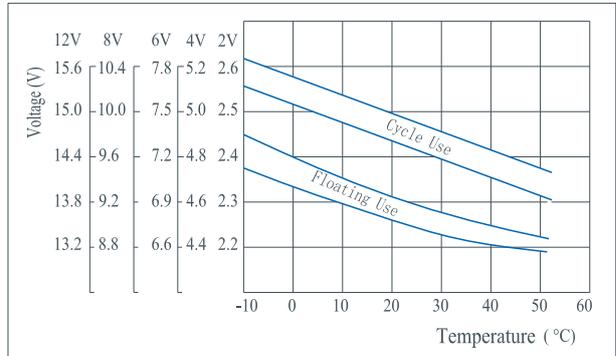
## Charging Characteristics(25°C)



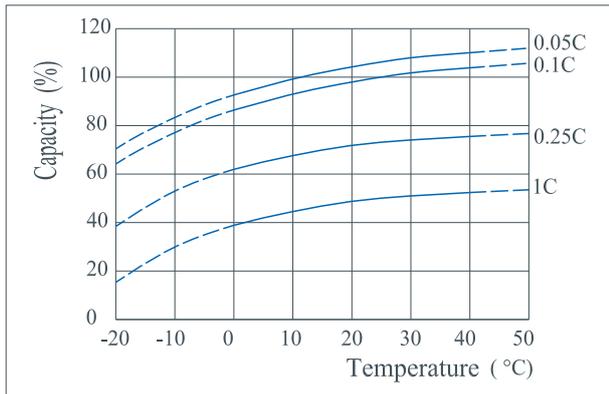
## Floating Life on Temperature



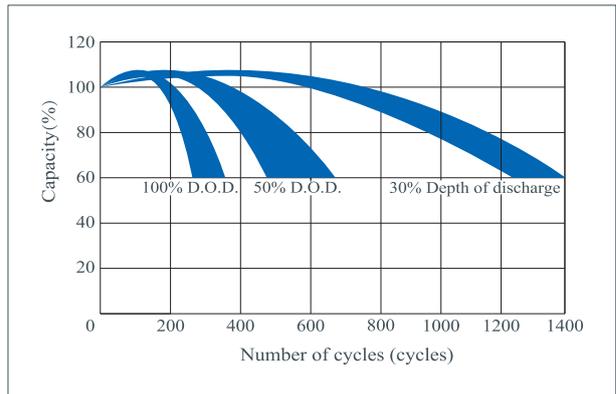
## The Relationship for Charging Voltage and Temperature



## Effect of Temperature on Capacity



## Cycle Life on D.O.D(25°C)



High purity lead raw material, low internal resistance, low self discharge, purity above 99.995%.



Multi element alloy grid with high corrosion resistance.



Ultra low internal resistance diaphragm (diaphragm), high oxygen recombination rate.



Gold acidity ratio, strong power, no acid leakage.



Excellent recovery ability after deep discharge.



Long life design, over discharge resistance.