

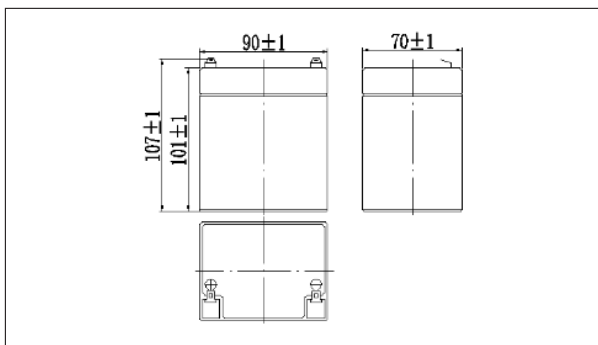
## NP12-5Ah 12V5Ah

### ● Specifications

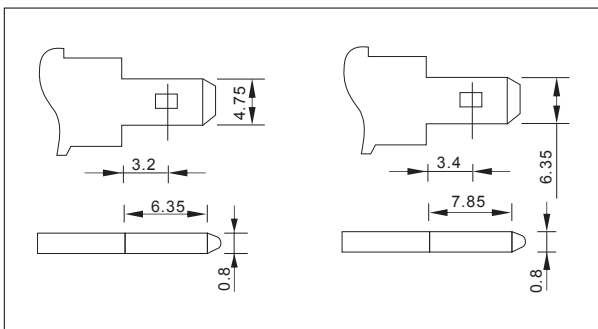
|                               |              |                    |
|-------------------------------|--------------|--------------------|
| Nominal Voltage               |              | 12V                |
| Rated capacity (20 hour rate) |              | 5Ah                |
| Dimensions                    | Length       | 90±1mm(3.54inch)   |
|                               | Width        | 70±1mm(2.76inch)   |
|                               | Height       | 101±1mm(3.98inch)  |
|                               | Total Height | 107±1mm(4.21inch)  |
| Approx. Weight                |              | 1.65kg(3.64lbs)±4% |



### ● Outer dimensions (mm)



### ● Terminal Type (mm)



### ● 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   |

### ● Constant Current Discharge Characteristics Unit:A(25°C,77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 19.1 | 12.1  | 9.45  | 5.33  | 3.28  | 1.79 | 1.24 | 1.03 | 0.87 | 0.47 | 0.25 |
| 9.90V    | 18.5 | 11.7  | 9.22  | 5.22  | 3.23  | 1.78 | 1.23 | 1.02 | 0.87 | 0.47 | 0.25 |
| 10.2V    | 17.8 | 11.3  | 8.88  | 5.06  | 3.14  | 1.77 | 1.22 | 1.01 | 0.86 | 0.47 | 0.25 |
| 10.5V    | 17.0 | 10.8  | 8.58  | 4.94  | 3.08  | 1.74 | 1.22 | 1.01 | 0.86 | 0.47 | 0.25 |
| 10.8V    | 16.0 | 10.2  | 8.13  | 4.76  | 2.99  | 1.69 | 1.18 | 0.97 | 0.83 | 0.46 | 0.25 |

### ● Constant Power Discharge Characteristics Unit:W(25°C,77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 213  | 136   | 108   | 61.0  | 37.9  | 21.0 | 14.7 | 12.2 | 10.4 | 5.68 | 3.05 |
| 9.90V    | 207  | 132   | 105   | 59.8  | 37.4  | 20.8 | 14.6 | 12.1 | 10.4 | 5.66 | 3.03 |
| 10.2V    | 198  | 127   | 101   | 58.0  | 36.4  | 20.7 | 14.5 | 12.1 | 10.3 | 5.63 | 3.02 |
| 10.5V    | 190  | 121   | 97.8  | 56.6  | 35.7  | 20.3 | 14.4 | 12.0 | 10.2 | 5.60 | 3.00 |
| 10.8V    | 179  | 115   | 92.6  | 54.5  | 34.6  | 19.8 | 14.0 | 11.6 | 9.90 | 5.49 | 2.94 |

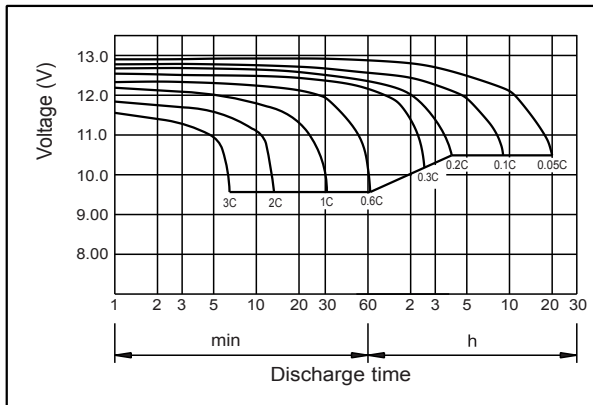
Note: The above characteristics data can be obtained within three charge or discharge cycles.

### ● Characteristics

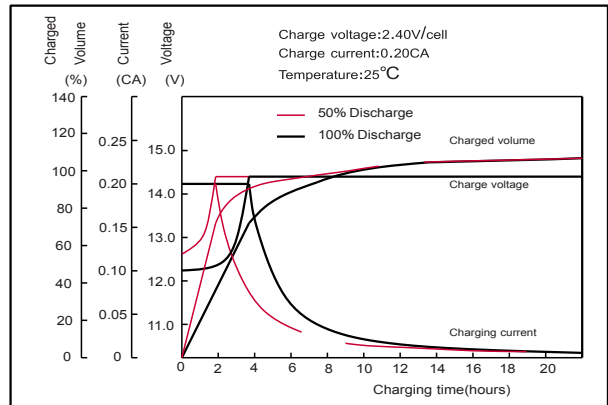
|  |             |   |
|--|-------------|---|
| Capacity (25°C)                          | 20HR(10.5V) | 5Ah   |
|  | 10HR(10.5V) | 4.7Ah   |
|  | 1HR(9.60V)  | 3Ah   |
| Terminal type                            |             | T1/T2   |
| Internal resistance (Fully charged,25°C) |             | Approx.27m Ω  |
| Capacity affected by temperature (20HR)  | 40°C        | 102%  |
|  | 25°C        | 100%  |
|  | 0°C         | 85%   |
|  | -15°C       | 65%   |
| Self-discharge (25°C)                    | 3month      | Remaining Capacity:91%                                |
|  | 6month      | Remaining Capacity:82%                                |
|  | 12month     | 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)             |             | 13.50 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                 |             | 1.5A  |
| Maximum discharge current                |             | 75A(5 sec.)   |
| Designed floating life(20°C)             |             | 5 years   |

## NP12-5Ah 12V5Ah

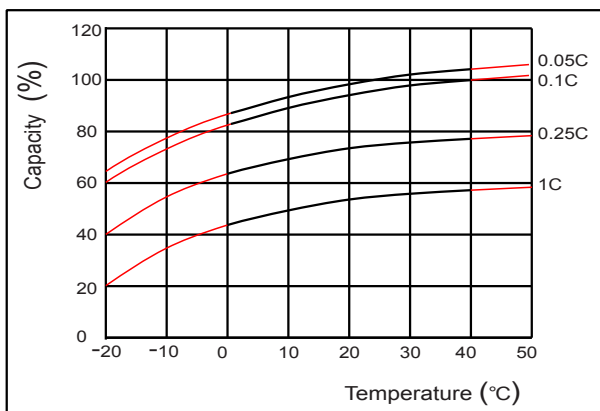
### ● Discharge characteristics(25°C)



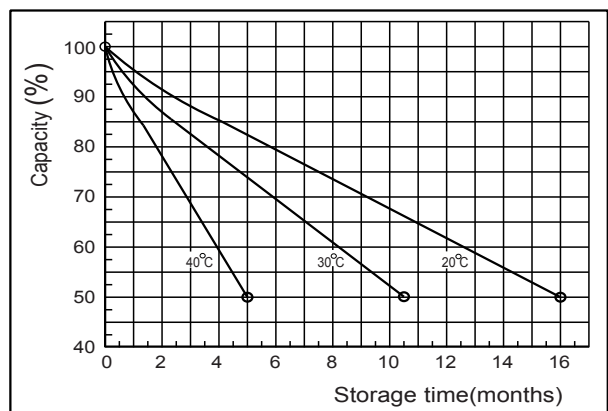
### ● Charging characteristics (25°C)



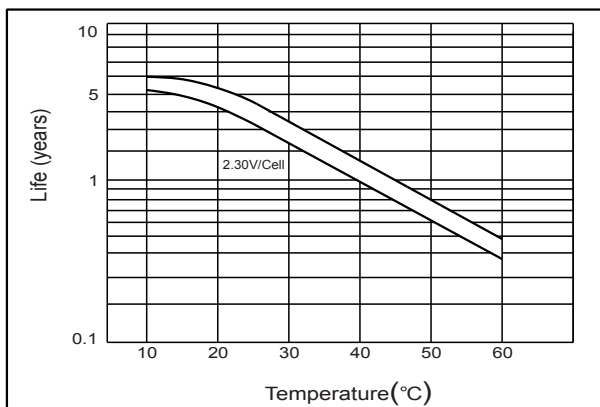
### ● Effect of temperature on capacity



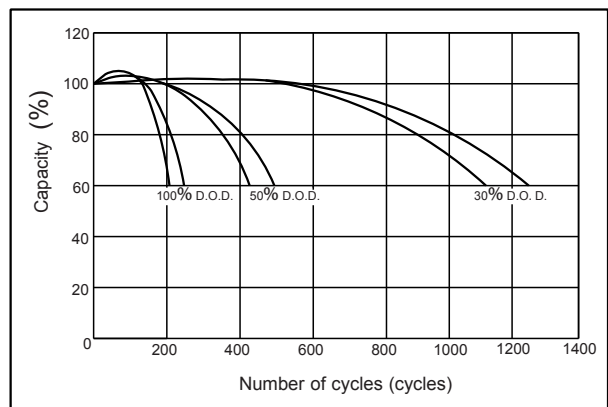
### ● Self-discharge characteristics



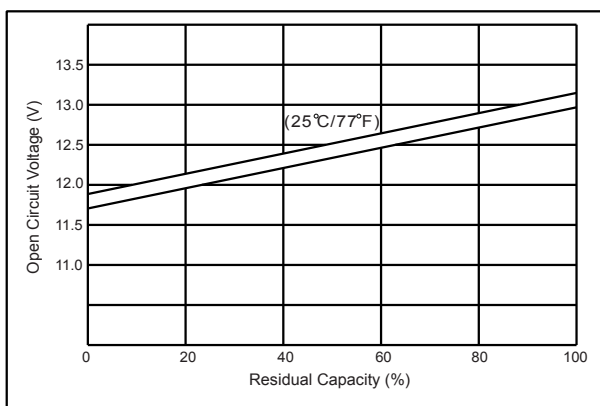
### ● Floating life on temperature



### ● Cycle life on D.O.D.(25°C)



### ● The relationship for OCV and Capacity (25°C)



### ● The relationship for Charging voltage and Temperature

