

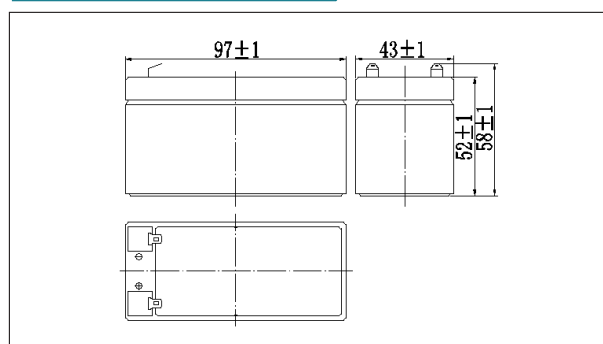
## NP12-1.2Ah 12V1.2Ah

### ● Specifications

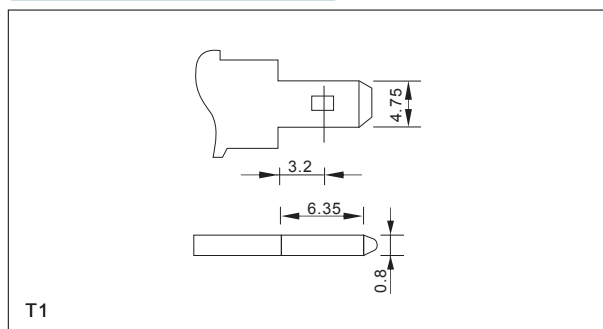
|                               |              |                    |
|-------------------------------|--------------|--------------------|
| Nominal Voltage               |              | 12V                |
| Rated capacity (20 hour rate) |              | 1.2Ah              |
| Dimensions                    | Length       | 98±1mm(3.86inch)   |
|                               | Width        | 43±1mm(1.69inch)   |
|                               | Height       | 52±1mm(2.05inch)   |
|                               | Total Height | 58±1mm(2.28inch)   |
| Approx. Weight                |              | 0.54kg(1.19lbs)±5% |



### ● Outer dimensions (mm)



### ● Terminal Type (mm)



### ● Characteristics

|                                           |             |                                                       |
|-------------------------------------------|-------------|-------------------------------------------------------|
| Capacity (25°C)                           | 20HR(10.5V) | 1.2Ah                                                 |
|                                           | 10HR(10.5V) | 1.1Ah                                                 |
|                                           | 1HR(9.60V)  | 0.72Ah                                                |
| Terminal type                             |             | T1                                                    |
| Internal resistance (Fully charged, 25°C) |             | Approx. 90m Ω                                         |
| Capacity affected by temperature (20HR)   | 40°C        | 102%                                                  |
|                                           | 25°C        | 100%                                                  |
|                                           | 0°C         | 85%                                                   |
|                                           | -15°C       | 65%                                                   |
| Self-discharge (25°C)                     | 3 months    | Remaining Capacity: 91%                               |
|                                           | 6 months    | Remaining Capacity: 82%                               |
|                                           | 12 months   | 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                  |             | 0.36A                                                 |
| Maximum discharge current                 |             | 18A(5 sec.)                                           |
| Designed floating life(20°C)              |             | 5 years                                               |

### ● 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    | 4.58 | 2.90  | 2.27  | 1.28  | 0.79  | 0.43 | 0.30 | 0.25 | 0.21 | 0.11 | 0.06 |
| 9.90V    | 4.45 | 2.82  | 2.21  | 1.25  | 0.77  | 0.43 | 0.30 | 0.24 | 0.21 | 0.11 | 0.06 |
| 10.2V    | 4.26 | 2.70  | 2.13  | 1.21  | 0.75  | 0.42 | 0.29 | 0.24 | 0.21 | 0.11 | 0.06 |
| 10.5V    | 4.08 | 2.58  | 2.06  | 1.18  | 0.74  | 0.42 | 0.29 | 0.24 | 0.21 | 0.11 | 0.06 |
| 10.8V    | 3.85 | 2.44  | 1.95  | 1.14  | 0.72  | 0.41 | 0.28 | 0.23 | 0.20 | 0.11 | 0.06 |

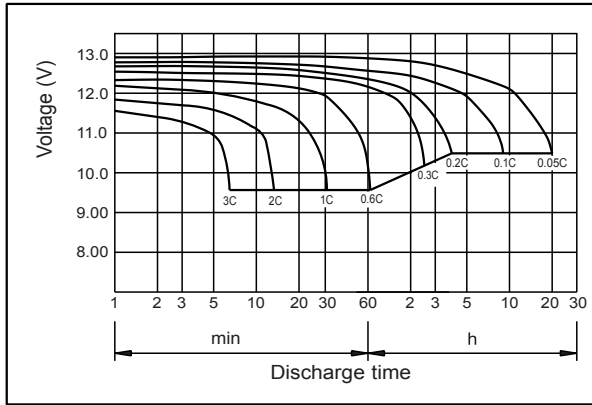
### ● Constant Power Discharge Characteristics Unit:W(25°C, 77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 51.2 | 32.8  | 25.9  | 14.6  | 9.10  | 5.03 | 3.53 | 2.93 | 2.50 | 1.36 | 0.73 |
| 9.90V    | 49.6 | 31.8  | 25.2  | 14.4  | 8.97  | 5.00 | 3.51 | 2.91 | 2.48 | 1.36 | 0.73 |
| 10.2V    | 47.6 | 30.5  | 24.3  | 13.9  | 8.74  | 4.96 | 3.49 | 2.89 | 2.47 | 1.35 | 0.72 |
| 10.5V    | 45.5 | 29.2  | 23.5  | 13.6  | 8.56  | 4.88 | 3.46 | 2.87 | 2.45 | 1.34 | 0.72 |
| 10.8V    | 43.0 | 27.5  | 22.2  | 13.1  | 8.30  | 4.76 | 3.36 | 2.79 | 2.38 | 1.32 | 0.71 |

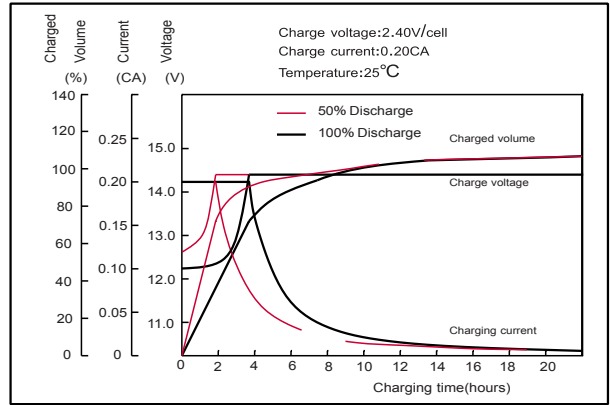
Note: The above characteristics data can be obtained within three charge or discharge cycles.

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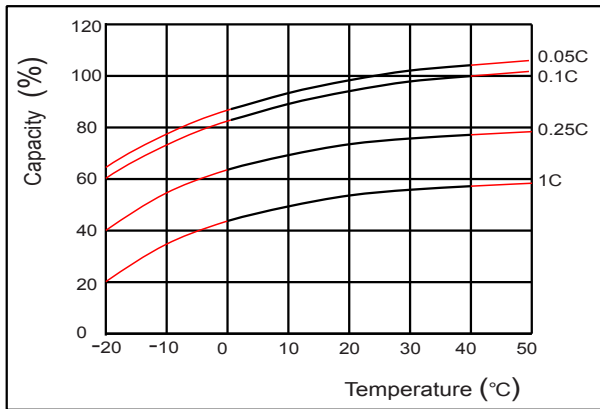
## Discharge characteristics(25°C)



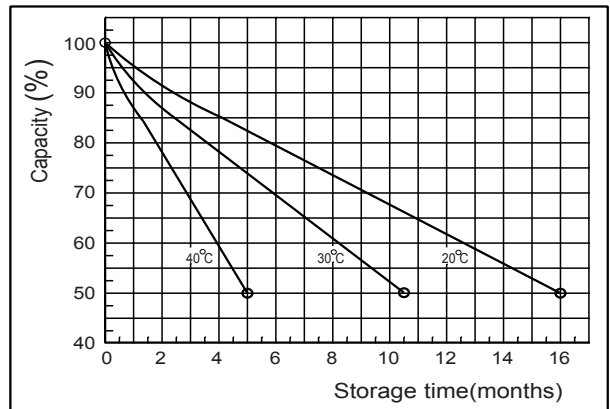
## Charging characteristics (25°C)



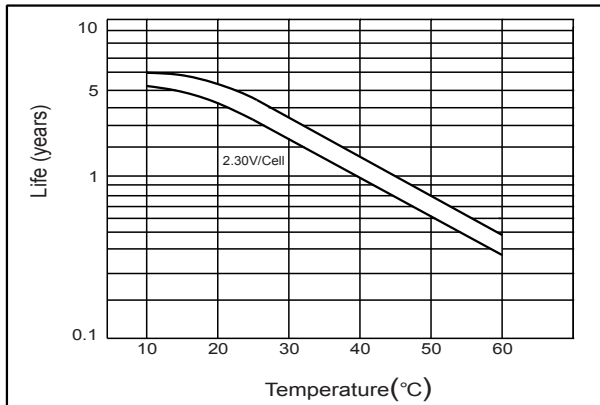
## Effect of temperature on capacity



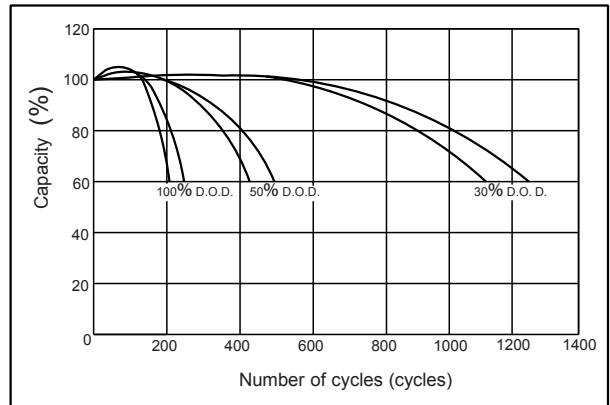
## Self-discharge characteristic



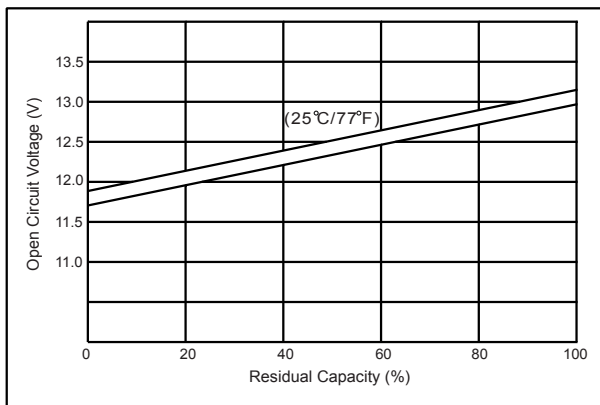
## Floating life on temperature



## Cycle life on D.O.D(25°C)



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



## The relationship for Charging voltage and Temperature

