

**Specifications**

|                                                  |              |                                                          |
|--------------------------------------------------|--------------|----------------------------------------------------------|
| Nominal Voltage                                  |              | 12 V                                                     |
| Capacity<br>(25°C)                               | 20HR(10.5V)  | 7Ah                                                      |
|                                                  | 10HR(10.5V)  | 6.6Ah                                                    |
|                                                  | 1HR(9.60V)   | 4.58Ah                                                   |
| Dimension                                        | Length       | 151 ± 1.5mm (5.94inch)                                   |
|                                                  | Width        | 65 ± 1mm (2.56inch)                                      |
|                                                  | Height       | 94 ± 1mm (3.70inch)                                      |
|                                                  | Total Height | 100 ± 1mm (3.94inch)                                     |
| Approx. Weight                                   |              | 2.22kg (4.90lbs) ± 5%                                    |
| Terminal type                                    |              | T1/T2                                                    |
| Internal resistance<br>(Fully charged, 25°C)     |              | Approx. 28m Ω                                            |
| Capacity<br>affected by<br>temperature<br>(20HR) | 40°C         | 102%                                                     |
|                                                  | 25°C         | 100%                                                     |
|                                                  | 0°C          | 85%                                                      |
|                                                  | -15°C        | 65%                                                      |
| Self-discharge<br>(25°C)                         | 3 month      | Remaining Capacity: 91%                                  |
|                                                  | 6 month      | Remaining Capacity: 82%                                  |
|                                                  | 12 month     | Remaining Capacity: 65%                                  |
| Nominal operating<br>temperature                 |              | 25°C ± 3°C (77°F ± 5°F)                                  |
| Operating<br>temperature<br>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:<br>-18mV/°C |
| Cyclic charging voltage(25°C)                    |              | 14.50 to 14.90V<br>Temperature compensation:<br>-30mV/°C |
| Maximum charging current                         |              | 2.1A                                                     |
| Terminal material                                |              | Copper                                                   |
| Maximum discharge current                        |              | 105A(5 sec.)                                             |
| Designed floating life(20°C)                     |              | 10years                                                  |

- ◆ Absorbent glass mat technology;
- ◆ Recognized by UL & CE;
- ◆ ABS container.

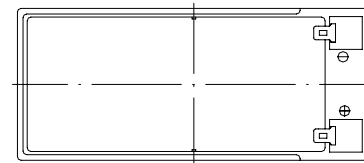
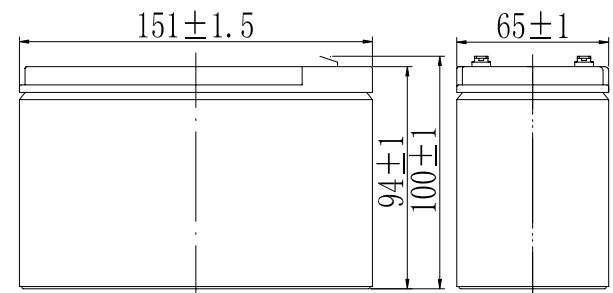
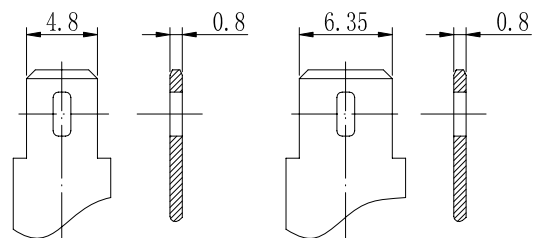
**Constant Current Discharge Characteristics (A, 25°C)**

| F.V/TIME | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 26.8 | 16.9  | 13.4  | 7.47  | 4.58  | 2.50 | 1.80 | 1.44 | 1.22 | 0.67 | 0.36 |
| 9.90V    | 26.0 | 16.4  | 13.1  | 7.32  | 4.51  | 2.49 | 1.79 | 1.43 | 1.22 | 0.66 | 0.36 |
| 10.2V    | 24.9 | 15.7  | 12.6  | 7.10  | 4.40  | 2.47 | 1.77 | 1.42 | 1.21 | 0.66 | 0.35 |
| 10.5V    | 23.8 | 15.1  | 12.2  | 6.93  | 4.31  | 2.43 | 1.76 | 1.41 | 1.20 | 0.66 | 0.35 |
| 10.8V    | 22.5 | 14.2  | 11.5  | 6.67  | 4.18  | 2.37 | 1.71 | 1.37 | 1.16 | 0.64 | 0.35 |

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

| F.V/TIME | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 299  | 191   | 153   | 85.6  | 53.1  | 29.3 | 21.4 | 17.1 | 14.6 | 7.99 | 4.29 |
| 9.90V    | 290  | 185   | 149   | 83.9  | 52.3  | 29.1 | 21.2 | 17.0 | 14.5 | 7.95 | 4.28 |
| 10.2V    | 278  | 177   | 144   | 81.4  | 50.9  | 28.9 | 21.1 | 16.9 | 14.4 | 7.92 | 4.26 |
| 10.5V    | 266  | 170   | 139   | 79.4  | 49.9  | 28.4 | 20.9 | 16.8 | 14.3 | 7.87 | 4.23 |
| 10.8V    | 251  | 160   | 131   | 76.5  | 48.4  | 27.7 | 20.3 | 16.3 | 13.9 | 7.71 | 4.15 |

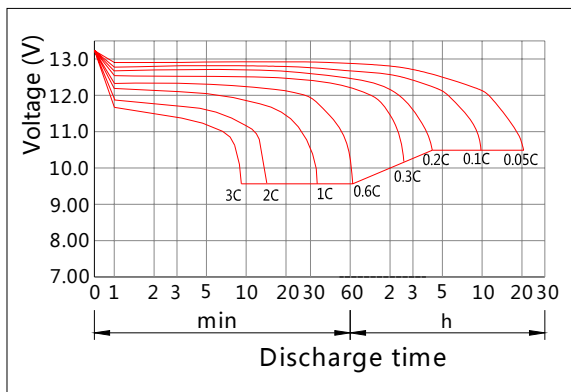
Note: The above characteristics data can be obtained within three charge/discharge cycles.

**Dimensions****Terminal**

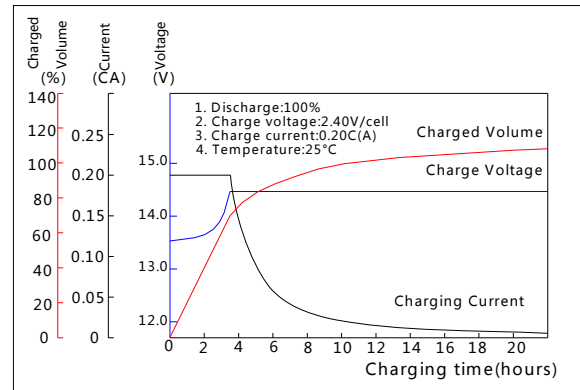
Terminal T1

Terminal T2

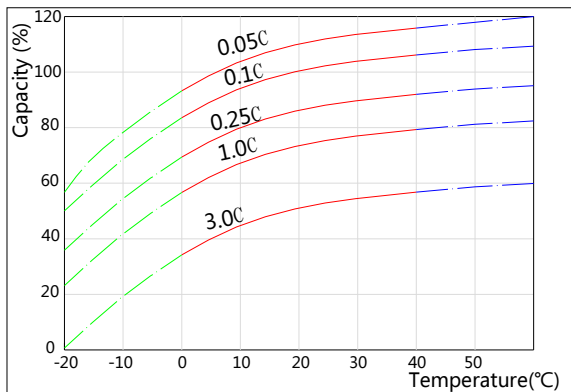
## Discharge Characteristics(25°C)



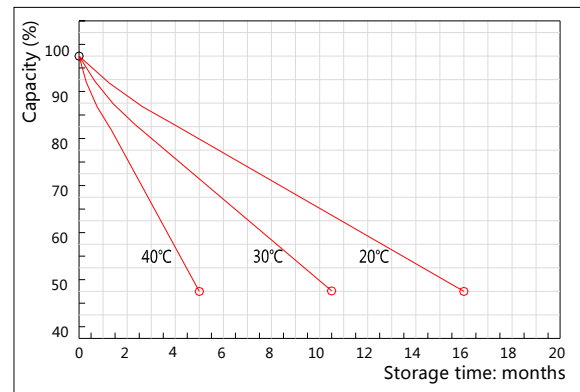
## Charging Characteristics(25°C)



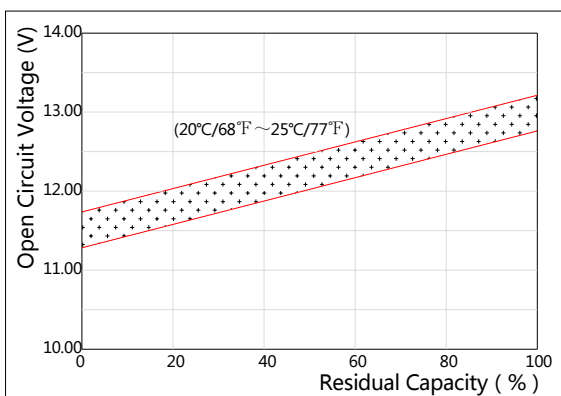
## Effect of Temperature on Capacity



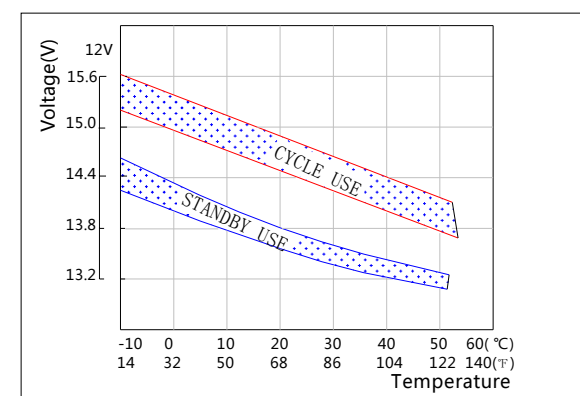
## Self-discharge Characteristics



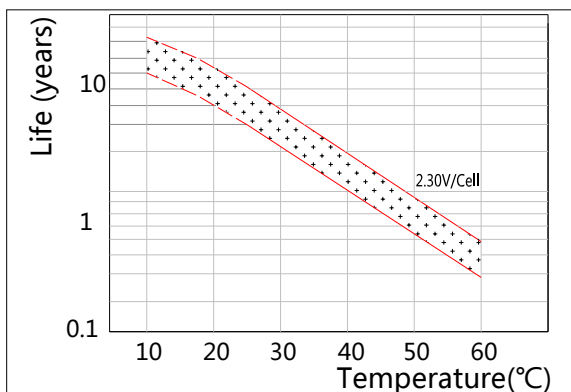
## The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



## The Relationship for Charging Voltage and Temperature



## Floating Life on Temperature



## Cycle Life on D.O.D.(25°C)

