

**Specifications**

|   |              |   |
|---|--------------|---|
| Nominal Voltage                           |              | 12 V  |
| Capacity (25°C)                           | 20HR(10.5V)  | 12Ah  |
|   | 10HR(10.5V)  | 11Ah  |
|   | 1HR(9.60V)   | 7.8Ah   |
| Dimension                                 | Length       | 151 ± 1.5mm (5.94inch)                                |
|   | Width        | 98 ± 1mm (3.86inch)                                   |
|   | Height       | 95 ± 1mm (3.74inch)                                   |
|   | Total Height | 101 ± 1mm (3.98inch)                                  |
| Approx. Weight                            |              | 3.5kg (7.92lbs) ± 5%                                  |
| Terminal type                             |              | T2/T1   |
| Internal resistance (Fully charged, 25°C) |              | Approx. 19m Ω   |
| 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 14.90V<br>Temperature compensation: -30mV/°C |
| Maximum charging current                  |              | 3.6A  |
| Terminal material                         |              | Copper  |
| Maximum discharge current                 |              | 180A(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 | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V    | 28.8  | 22.8  | 12.7  | 7.80  | 4.26 | 3.06 | 2.45 | 2.08 | 1.35 | 1.13 | 0.61 |
| 9.90V    | 27.9  | 22.3  | 12.5  | 7.68  | 4.24 | 3.04 | 2.43 | 2.07 | 1.34 | 1.13 | 0.61 |
| 10.2V    | 26.8  | 21.4  | 12.1  | 7.49  | 4.20 | 3.02 | 2.42 | 2.05 | 1.33 | 1.12 | 0.60 |
| 10.5V    | 25.6  | 20.7  | 11.8  | 7.34  | 4.14 | 3.00 | 2.40 | 2.04 | 1.32 | 1.12 | 0.60 |
| 10.8V    | 24.2  | 19.6  | 11.4  | 7.11  | 4.03 | 2.91 | 2.33 | 1.98 | 1.28 | 1.09 | 0.59 |

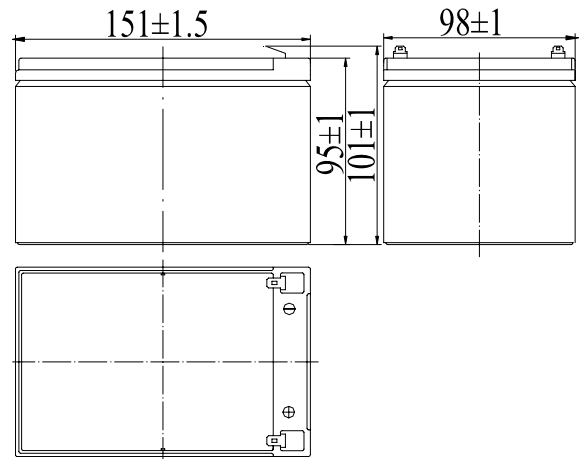
**Constant Power Discharge Characteristics (Watt, 25°C)**

| F.V/TIME | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V    | 325   | 260   | 146   | 90.3  | 49.9 | 36.4 | 29.2 | 24.8 | 16.2 | 13.6 | 7.31 |
| 9.90V    | 315   | 254   | 143   | 89.0  | 49.6 | 36.1 | 29.0 | 24.7 | 16.1 | 13.5 | 7.28 |
| 10.2V    | 302   | 244   | 138   | 86.7  | 49.1 | 35.9 | 28.8 | 24.5 | 16.0 | 13.5 | 7.24 |
| 10.5V    | 289   | 236   | 135   | 85.0  | 48.4 | 35.6 | 28.6 | 24.4 | 15.8 | 13.4 | 7.20 |
| 10.8V    | 273   | 224   | 130   | 82.4  | 47.2 | 34.6 | 27.7 | 23.6 | 15.4 | 13.1 | 7.06 |

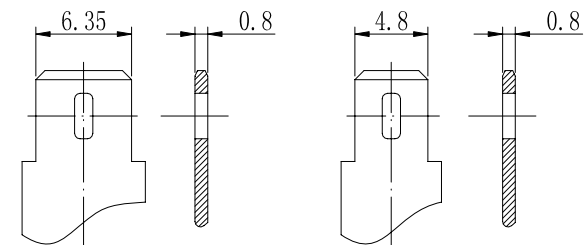
Note: The above characteristics data can be obtained within three charge/discharge cycles.



**Dimensions**



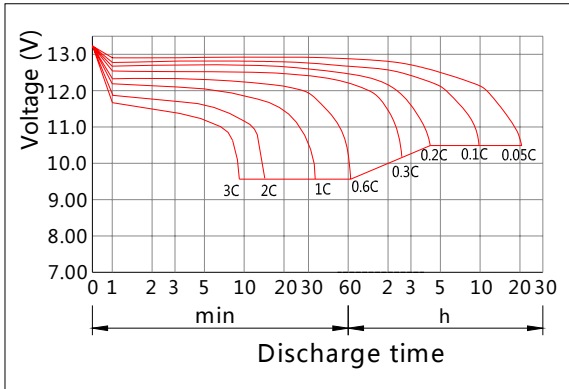
**Terminal**



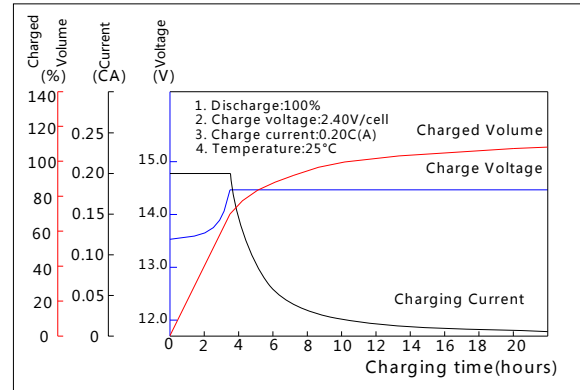
Terminal T2

Terminal T1

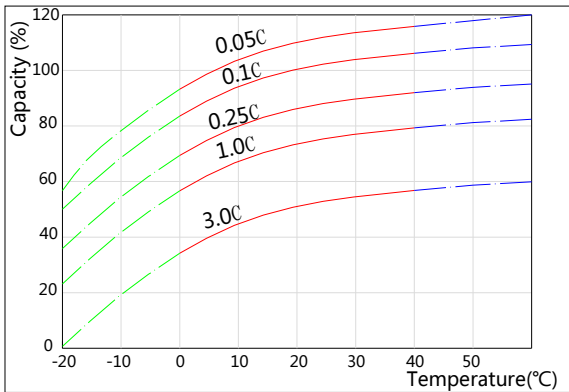
Discharge Characteristics(25°C)



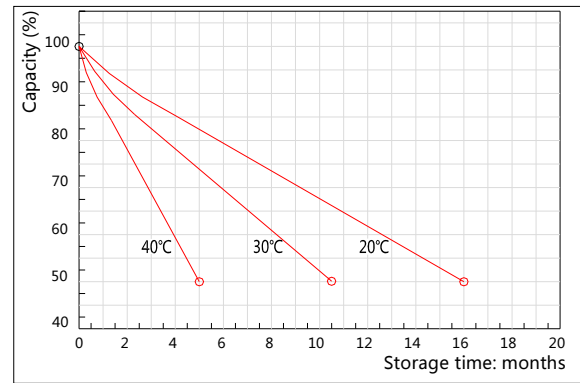
Charging Characteristics(25°C)



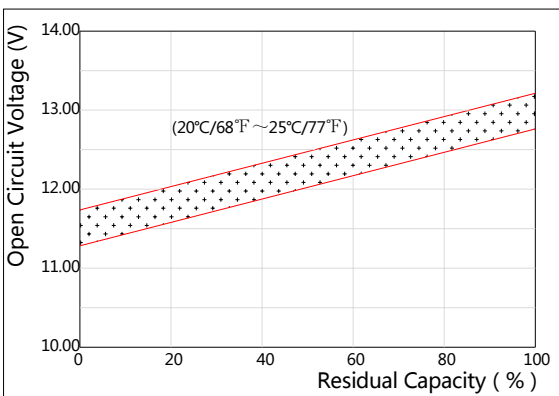
Effect of Temperature on Capacity



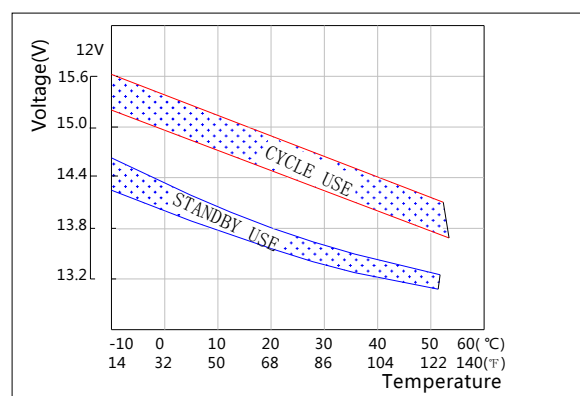
Self-discharge Characteristics



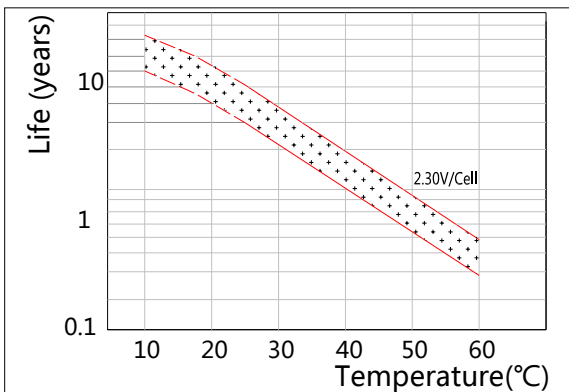
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



The Relationship for Charging Voltage and Temperature



Floating Life on Temperature



Cycle Life on D.O.D(25°C)

