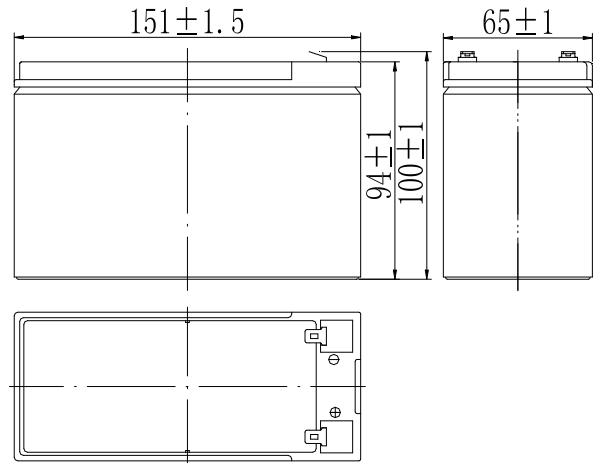
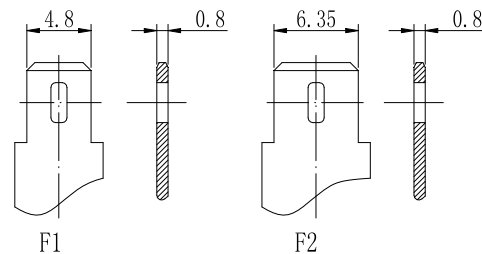


**Specifications**

|   |              |   |
|---|--------------|---|
| Nominal Voltage                           |              | 12 V  |
| Capacity (25°C)                           | 20HR(10.5V)  | 7.0Ah   |
|   | 10HR(10.5V)  | 6.5Ah   |
|   | 1HR(9.60V)   | 4.5Ah   |
| 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                            |              | 2.15kg (4.74lbs) ± 5%                                 |
| Terminal type                             |              | F1/F2   |
| Internal resistance (Fully charged, 25°C) |              | Approx. 30mΩ  |
| 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                  |              | 2.1A  |
| Maximum discharge current                 |              | 105A(5 sec.)  |
| Designed floating life(20°C)              |              | 5 years   |

**Dimensions**

**Terminal**

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

| F.V/TIME | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 26.7 | 16.9  | 13.2  | 7.46  | 4.59  | 2.51 | 1.74 | 1.44 | 1.22 | 0.66 | 0.36 |
| 9.90V    | 25.9 | 16.4  | 12.9  | 7.31  | 4.52  | 2.49 | 1.72 | 1.43 | 1.21 | 0.66 | 0.35 |
| 10.2V    | 24.9 | 15.8  | 12.4  | 7.08  | 4.40  | 2.47 | 1.71 | 1.42 | 1.21 | 0.66 | 0.35 |
| 10.5V    | 23.8 | 15.1  | 12.0  | 6.91  | 4.31  | 2.43 | 1.70 | 1.41 | 1.20 | 0.65 | 0.35 |
| 10.8V    | 22.5 | 14.2  | 11.4  | 6.66  | 4.18  | 2.37 | 1.65 | 1.36 | 1.16 | 0.64 | 0.34 |

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

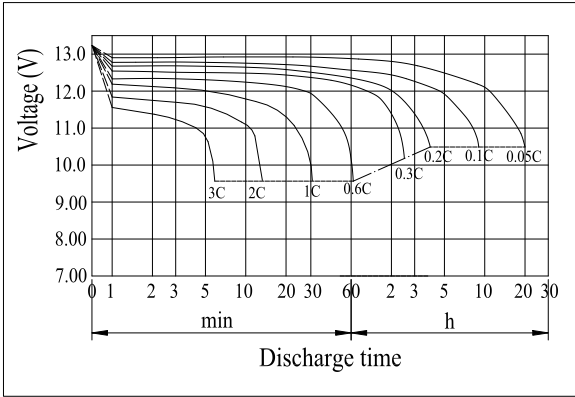
| F.V/TIME | 5min | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V    | 298  | 191   | 151   | 85.4  | 53.1  | 29.3 | 20.6 | 17.1 | 14.6 | 7.95 | 4.26 |
| 9.90V    | 289  | 185   | 147   | 83.7  | 52.3  | 29.2 | 20.5 | 17.0 | 14.5 | 7.92 | 4.25 |
| 10.2V    | 278  | 178   | 142   | 81.2  | 51.0  | 28.9 | 20.3 | 16.9 | 14.4 | 7.88 | 4.23 |
| 10.5V    | 266  | 170   | 137   | 79.2  | 50.0  | 28.5 | 20.2 | 16.8 | 14.3 | 7.84 | 4.20 |
| 10.8V    | 251  | 161   | 130   | 76.3  | 48.4  | 27.8 | 19.6 | 16.3 | 13.9 | 7.68 | 4.12 |

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

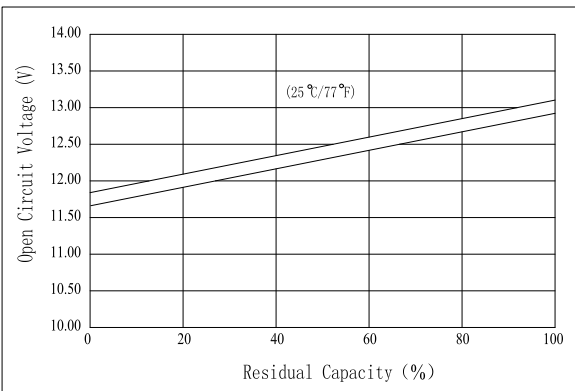
**Construction**

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

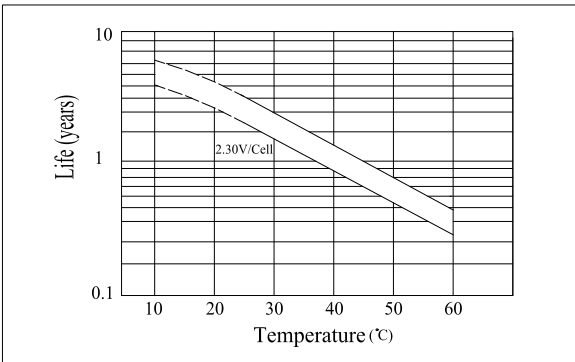
**Discharge Characteristics(25°C)**



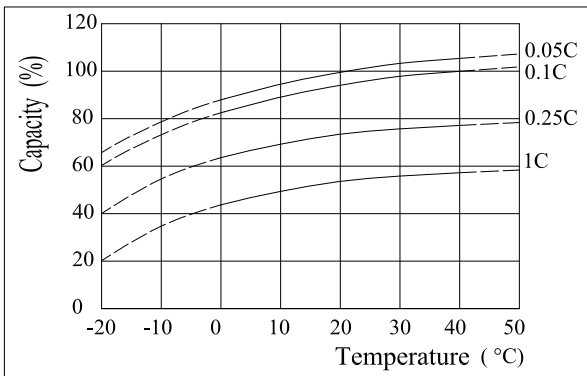
**The Relationship for Open Circuit Voltage and Residual Capacity (25°C)**



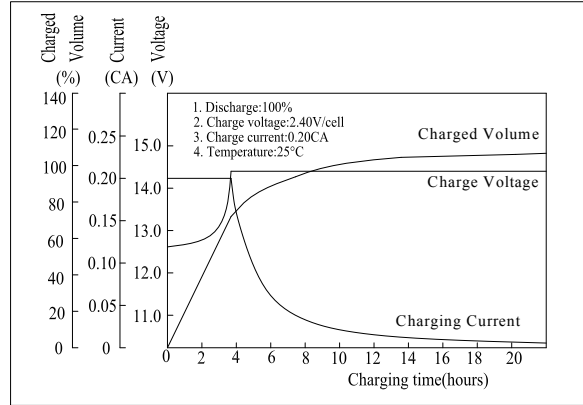
**Floating Life on Temperature**



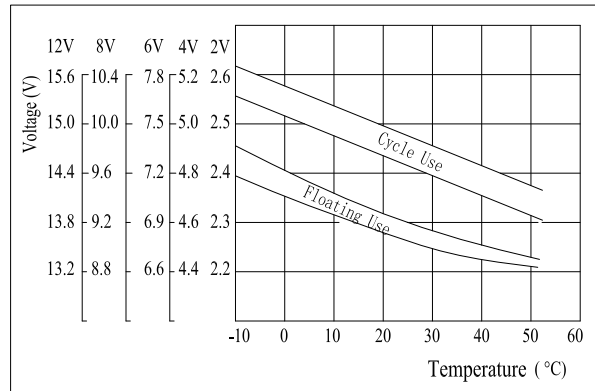
**Effect of Temperature on Capacity**



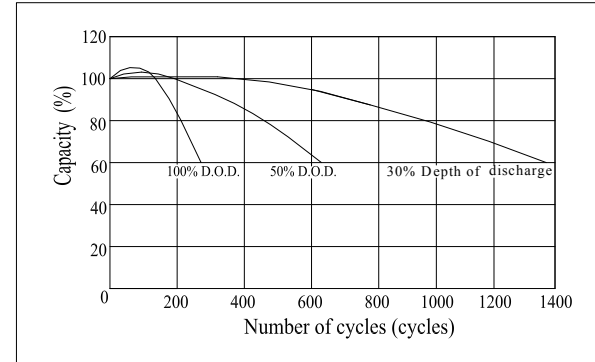
**Charging Characteristics(25°C)**



**The Relationship for Charging Voltage and Temperature**



**Cycle Life on D.O.D(25°C)**



**Self-discharge Characteristics**

