



This is a general purpose battery with 10 years floating design life, meet with IEC, JIS, BS and Eurobat standard. With heavy duty grid, thickness plates, special additives, these batteries have long and reliable standby service life. Typically used for fire alarm panels and Emergency Warning and Intercommunication Systems (EWIS).

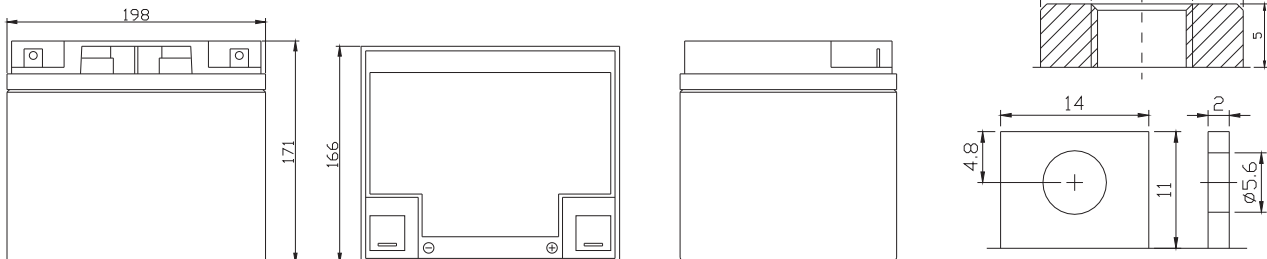
## Specification

|  |   |
|--|---|
| Cells Per Unit                             | 6   |
| Voltage Per Unit                           | 12  |
| Capacity                                   | 40Ah@10hr-rate to 1.80V per cell @25°C  |
| Weight                                     | Approx. 12.8 Kg   |
| Max. Discharge Current                     | 400A (5 sec)  |
| Internal Resistance                        | Approx. 8 mΩ  |
| Operating Temperature Range                | Discharge: -20°C~60°C<br>Charge: 0°C~50°C<br>Storage: -20°C~60°C  |
| Normal Operating Temperature Range         | 25°C±5°C  |
| Float charging Voltage                     | 13.6 to 13.8 VDC/unit Average at 25°C   |
| Recommended Maximum Charging Current Limit | 11.4 A  |
| Equalization and Cycle Service             | 14.6 to 14.8 VDC/unit Average at 25°C   |
| Self Discharge                             | Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using. |
| Terminal                                   | Terminal F4/F11   |
| Container Material                         | A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.   |



## Dimensions

Unit: mm Dimension: 198(L)×166(W)×171(H)

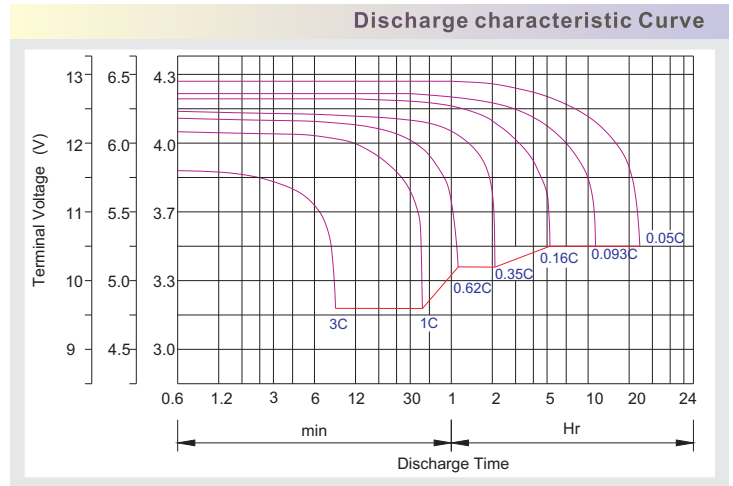
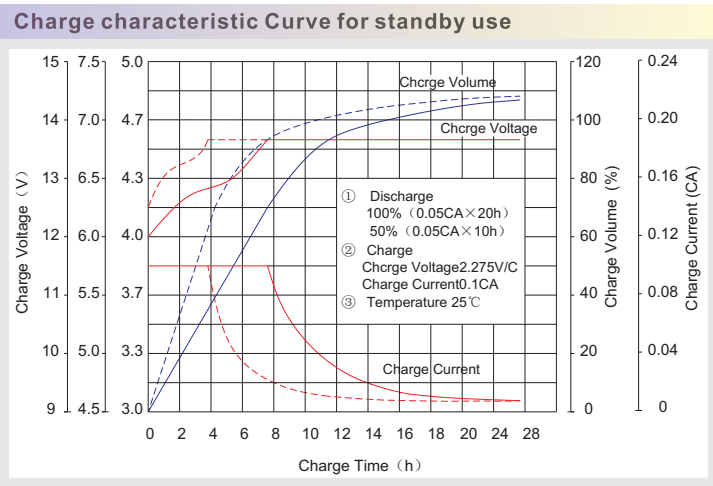
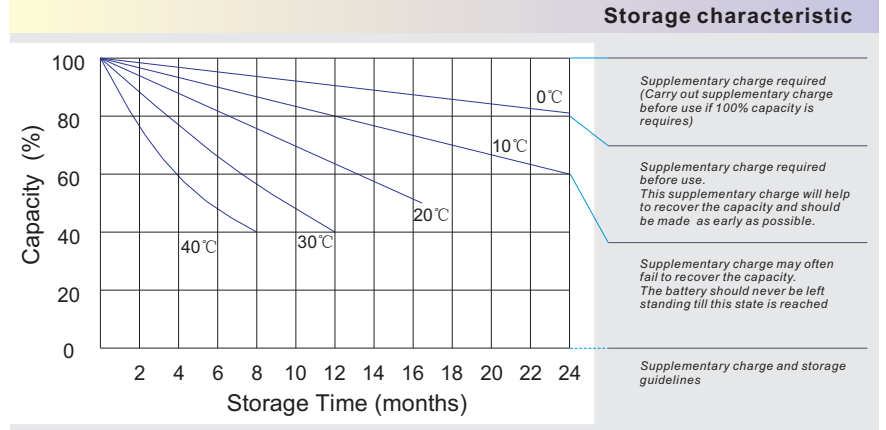
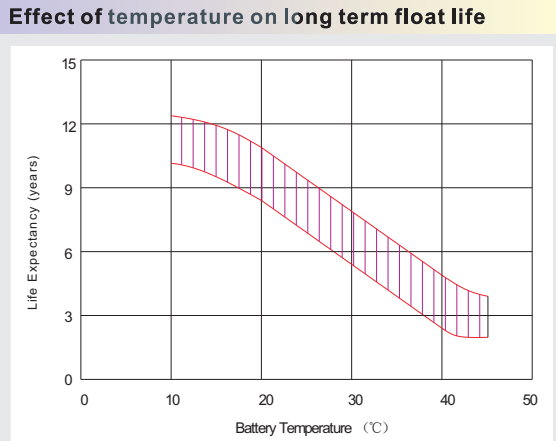


### Constant Current Discharge Characteristics: A (25°C)

| F.V/Time | 5MIN  | 10MIN | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 8HR   | 10HR  | 20HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V    | 127.3 | 93.74 | 73.08 | 44.53 | 24.70 | 14.77 | 10.20 | 8.449 | 7.114 | 4.859 | 4.030 | 2.150 |
| 10.0V    | 123.6 | 89.20 | 71.58 | 43.76 | 24.59 | 14.66 | 10.16 | 8.410 | 7.072 | 4.820 | 3.992 | 2.111 |
| 10.2V    | 120.0 | 86.05 | 70.45 | 42.95 | 24.36 | 14.55 | 10.08 | 8.371 | 7.030 | 4.780 | 3.953 | 2.072 |
| 10.5V    | 107.7 | 79.40 | 67.08 | 42.63 | 24.13 | 14.44 | 10.04 | 8.293 | 6.946 | 4.741 | 3.914 | 2.033 |
| 10.8V    | 97.24 | 72.41 | 61.84 | 41.90 | 23.56 | 14.18 | 9.770 | 8.097 | 6.821 | 4.662 | 3.875 | 1.994 |
| 11.1V    | 83.03 | 64.71 | 55.46 | 39.23 | 22.38 | 13.55 | 9.340 | 7.706 | 6.528 | 4.464 | 3.759 | 1.877 |

### Constant Power Discharge Characteristics: W(25°C)

| F.V/Time | 5MIN  | 10MIN | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 8HR   | 10HR  | 20HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V    | 1343  | 998.4 | 796.7 | 499.7 | 285.4 | 174.1 | 121.4 | 100.7 | 84.87 | 58.02 | 48.16 | 25.78 |
| 10.0V    | 1317  | 967.8 | 783.9 | 493.6 | 284.7 | 173.2 | 121.4 | 100.6 | 84.65 | 57.74 | 47.86 | 25.34 |
| 10.2V    | 1302  | 942.2 | 775.1 | 490.1 | 282.5 | 172.1 | 120.9 | 100.4 | 84.36 | 57.36 | 47.43 | 24.87 |
| 10.5V    | 1185  | 877.4 | 739.3 | 486.7 | 280.0 | 170.9 | 120.4 | 99.43 | 83.35 | 56.89 | 46.97 | 24.40 |
| 10.8V    | 1079  | 808.8 | 683.3 | 478.9 | 274.8 | 168.7 | 117.1 | 97.17 | 81.85 | 55.94 | 46.50 | 23.93 |
| 11.1V    | 948.1 | 731.2 | 615.1 | 451.1 | 263.1 | 162.4 | 112.1 | 92.47 | 78.33 | 53.57 | 45.11 | 22.52 |



### Capacity Factors With Different Temperature

| Battery Type |        | -20°C | -10°C | 0°C | 5°C | 10°C | 20°C | 25°C | 30°C | 40°C | 45°C |
|--------------|--------|-------|-------|-----|-----|------|------|------|------|------|------|
| GEL Battery  | 6V&12V | 50%   | 70%   | 83% | 85% | 90%  | 98%  | 100% | 102% | 104% | 105% |
|              | 2V     | 60%   | 75%   | 85% | 88% | 92%  | 99%  | 100% | 103% | 105% | 106% |
| AGM Battery  | 6V&12V | 46%   | 66%   | 76% | 83% | 90%  | 98%  | 100% | 103% | 107% | 109% |
|              | 2V     | 55%   | 70%   | 80% | 85% | 92%  | 99%  | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

|                                |            |                   |            |
|--------------------------------|------------|-------------------|------------|
| Final Discharge Voltage V/cell | 1.75V      | 1.70V             | 1.60V      |
| Discharge Current (A)          | (A) ≤ 0.2C | 0.2C < (A) < 1.0C | (A) ≥ 1.0C |

**Charge the batteries at least once every six months, if they are stored at 25°C.**

Charging Method:

|                  |   |
|------------------|---|
| Constant Voltage | -0.2Cx2h+2.4-2.45V/cellx24h, Max. Current 0.3CA |
| Constant Current | -0.2Cx2h+0.1CAx12h                              |
| Fast             | -0.2Cx2h+0.3CAx4.0h                             |

### Maintenance & Cautions

|   |
|---|
| <b>Float Service:</b>   |
| ※ Every month, recommend inspection every battery voltage.  |
| ※ Every three months, recommend equalization charge for one time.   |
| Equalization charge method:   |
| Discharge: 100% rate capacity discharge.  |
| Charge: Max. current 0.3CA, constant voltage 2.4-2.45V/Cell charge 24h.   |
| ※ Effect of temperature on float charge voltage: -3mV/°C/Cell.  |
| ※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage. |