



RT1270 (12V7Ah)

RT series is a general purpose battery with 5 years design life in float service . It meets with IEC and JIS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RT series battery has reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security systems applications.



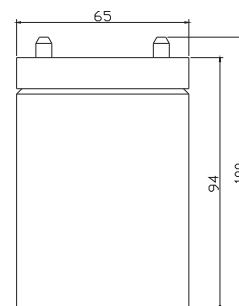
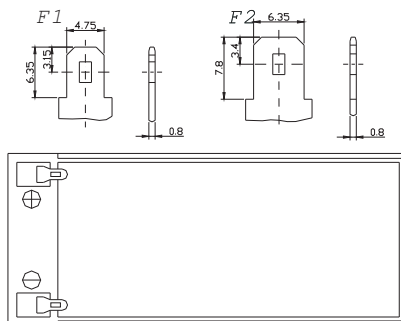
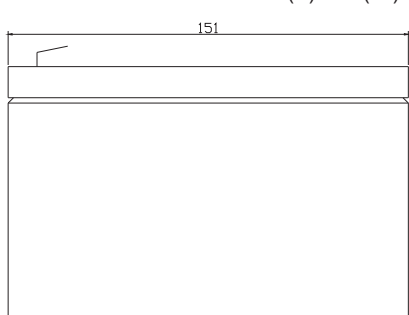
Specification

| | |
|--|---|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Capacity | 7Ah@20hr-rate to 1.75V per cell @25°C |
| Weight | Approx. 2.0 Kg(Tolerance±4%) |
| Max. Discharge Current | 70A (5 sec) |
| Internal Resistance | Approx. 30 mΩ |
| Operating Temperature Range | Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C |
| Normal Operating Temperature Range | 25°C±5°C |
| Float charging Voltage | 13.7 to 13.9 VDC/unit Average at 25°C |
| Recommended Maximum Charging Current Limit | 2.1 A |
| Equalization and Cycle Service | 14.6 to 14.8 VDC/unit Average at 25°C |
| Self Discharge | RITAR 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 | Faston Tab 187(F1)/Faston tab 250(F2) |
| Constainer Material | A.B.S. UL94-HB, UL94-V0 Optional. |



Dimensions

Unit: mm Dimension: 151(L)×65(W)×100(H)



Constant Current Discharge Characteristics : A(25°C)

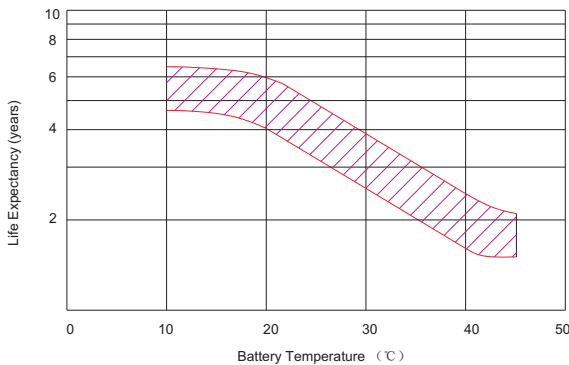
| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V | 26.23 | 17.20 | 12.81 | 6.818 | 4.322 | 2.643 | 1.742 | 1.418 | 1.166 | 0.768 | 0.665 | 0.356 |
| 10.0V | 25.28 | 16.77 | 12.40 | 6.730 | 4.265 | 2.590 | 1.709 | 1.398 | 1.155 | 0.765 | 0.658 | 0.353 |
| 10.2V | 23.80 | 15.94 | 12.05 | 6.628 | 4.224 | 2.562 | 1.694 | 1.384 | 1.148 | 0.758 | 0.648 | 0.343 |
| 10.5V | 21.39 | 14.90 | 11.37 | 6.445 | 4.172 | 2.529 | 1.679 | 1.364 | 1.138 | 0.751 | 0.645 | 0.336 |
| 10.8V | 19.17 | 13.90 | 10.73 | 6.232 | 4.114 | 2.508 | 1.659 | 1.317 | 1.133 | 0.748 | 0.634 | 0.322 |
| 11.1V | 16.77 | 12.74 | 9.90 | 5.995 | 4.016 | 2.407 | 1.627 | 1.298 | 1.128 | 0.742 | 0.624 | 0.317 |

Constant Power Discharge Characteristics : W(25°C)

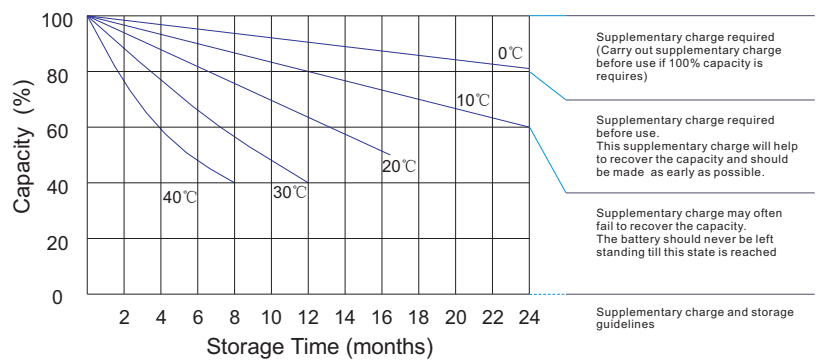
| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V | 284.5 | 188.6 | 141.3 | 78.04 | 51.67 | 31.14 | 20.82 | 16.98 | 13.97 | 9.195 | 7.964 | 4.270 |
| 10.0V | 277.1 | 184.6 | 139.3 | 77.23 | 50.91 | 30.73 | 20.48 | 16.74 | 13.84 | 9.159 | 7.889 | 4.235 |
| 10.2V | 263.5 | 177.3 | 137.5 | 76.56 | 50.53 | 30.46 | 20.31 | 16.58 | 13.76 | 9.090 | 7.787 | 4.126 |
| 10.5V | 240.5 | 170.0 | 130.3 | 75.00 | 49.85 | 30.14 | 20.16 | 16.36 | 13.65 | 9.013 | 7.733 | 4.057 |
| 10.8V | 217.0 | 159.1 | 123.1 | 73.22 | 49.20 | 29.92 | 19.92 | 15.81 | 13.58 | 8.974 | 7.615 | 3.894 |
| 11.1V | 191.4 | 148.1 | 115.9 | 71.21 | 48.12 | 28.87 | 19.53 | 15.58 | 13.53 | 8.910 | 7.502 | 3.832 |

All mentioned values are average values(Tolerance±2%).

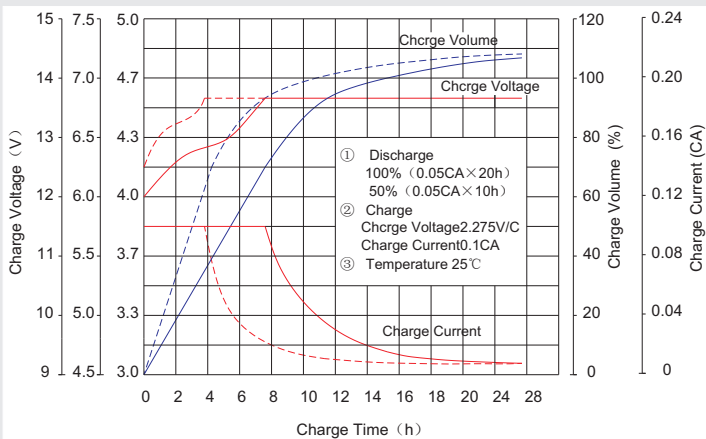
Effect of temperature on long term float life



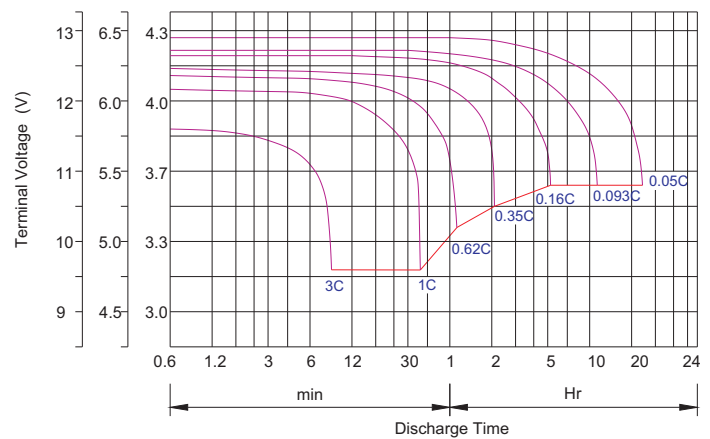
Storage characteristic



Charge characteristic Curve for standby use



Discharge characteristic Curve



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 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|----------|-----------------------|------------------|-----------------------|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N·m | 8~10N·m | 10~12N·m |

Maintenance & Cautions

Float Service:

- ※ 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 0.3C, 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.