

GFM

Series VRLA Battery

GFM-200



shoto®



Main Applications

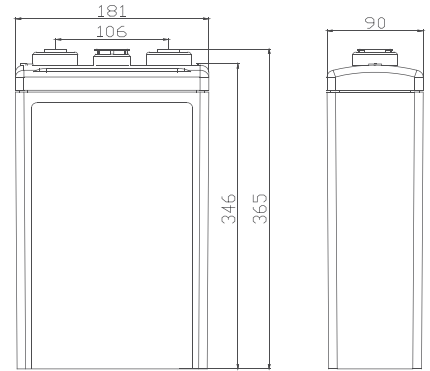
- ▶ Backup power for telecom and signal system
- ▶ Backup power for electric system and nuclear plants
- ▶ Storage for solar, wind and hydroelectricity energy
- ▶ Backup power for military and maritime equipment
- ▶ Backup power for UPS, emergency lighting

Benefits

- ▶ Reduce operational cost
- ▶ Excellent deep cycling performance
- ▶ Reduce CO₂ emission
- ▶ Long life



Dimensions



Technical Parameters

| | |
|---|---|
| Nominal Voltage | 2 V |
| Capacity | 200 Ah@10hr to 1.80 V@ 25°C(77°F) |
| Weight | 12.3 kg (27.12 lbs) |
| Dimensions | Length: 90 mm (3.54 in) Width: 181 mm (7.13 in) Height: 346 mm (13.62 in) Total height: 365 mm (14.37 in) |
| Internal Resistance (full charged) | 0.90 mΩ |
| Short- circuit Current | 2460 A |
| Self Discharge @25°C(77°F) | Less than 3% after 30 days storage |
| Operating Temperature Range | Discharge: -40°C ~ 50°C(-40°F ~ 122°F) Charge: -20°C ~ 45°C(-4°F ~ 113°F) Storage: -20°C ~ 40°C(-4°F ~ 104°F) |
| Recommended Operating Temperature | 15°C ~ 25°C (59°F ~ 77°F) |
| Recommended Charging Current | 30 A |
| Charging Voltage @25°C(77°F) | Float: 2.23 V/cell Equalize: 2.35 V/cell |
| Terminal | M8 |
| Container Materials | ABS/ABS V0 (Optional) |
| Capacity Affected by Temperature (C ₁₀) | 106% @ 40°C(104°F) 80% @ 0°C(32°F) 50% @ -20°C(-4°F) |
| Design life @25°C(77°F) | 15years |

Certification

- ISO 9001: 2008
- ISO 14001: 2004
- GB/T 28001- 2011
- UL
- CE

Technical Features

- ▶ Best performance for charge acceptability
- ▶ Excellent capacity retention rate
- ▶ Excellent capacity recovery performance
- ▶ Long life design for cyclic or float application

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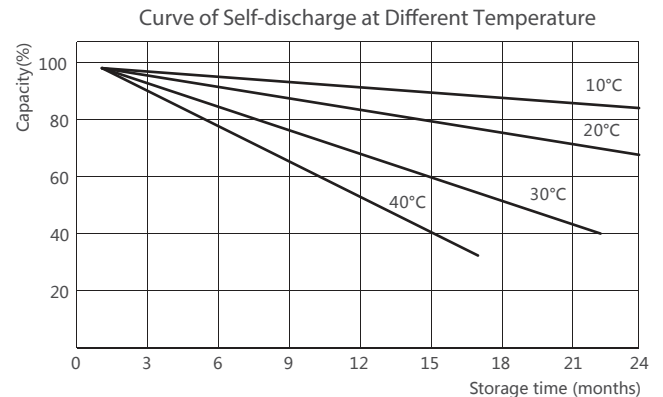
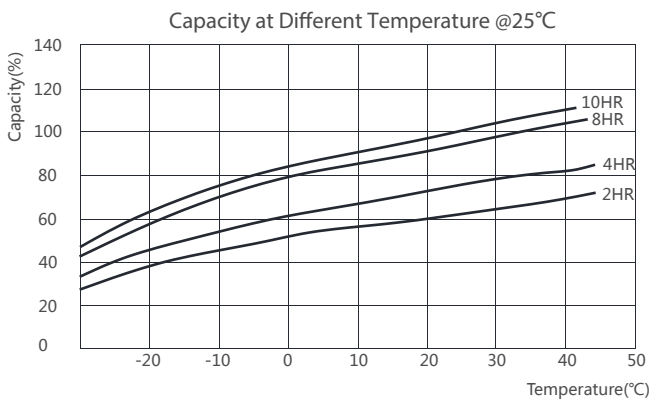
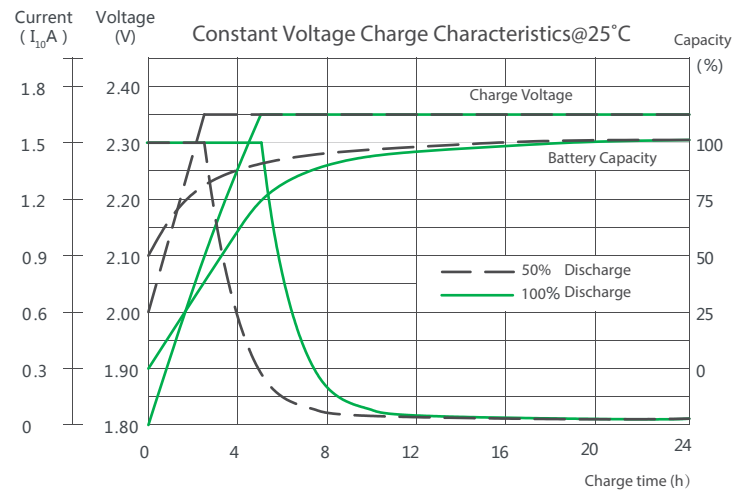
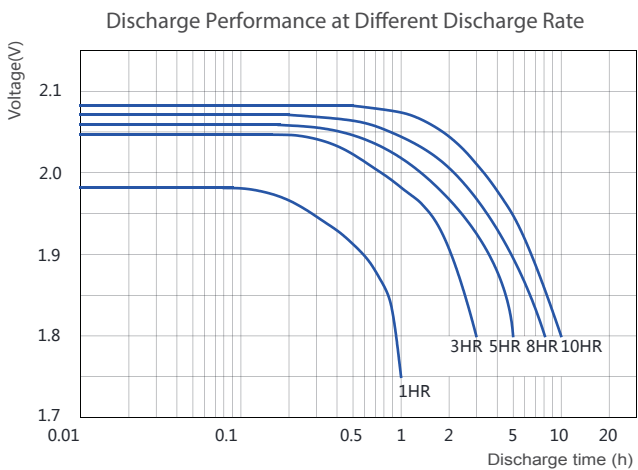
Constant Current Discharge Characteristics Unit: A (25°C,77°F)

| F.V/Time | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 8h | 10h |
|----------|-----|------|----|------|------|------|------|------|------|
| 1.90V | 86 | 77 | 59 | 45.6 | 37.7 | 30.9 | 26.1 | 22.1 | 18.4 |
| 1.85V | 93 | 88 | 64 | 50.3 | 40.3 | 33.6 | 28.1 | 23.5 | 19.9 |
| 1.80V | 101 | 91 | 67 | 53.4 | 41.9 | 35.5 | 30.7 | 24.2 | 20.7 |
| 1.75V | 113 | 95 | 70 | 54.8 | 42.8 | 36.2 | 31.3 | 24.7 | 21.0 |
| 1.70V | 126 | 99 | 73 | 55.9 | 43.4 | 36.7 | 31.7 | 24.8 | 21.2 |
| 1.65V | 131 | 101 | 74 | 56.3 | 43.8 | 36.9 | 31.9 | 24.9 | 21.3 |

Constant Power Discharge Characteristics Unit: W/cell (25°C,77°F)

| F.V/Time | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 8h | 10h |
|----------|-----|------|-----|-------|------|------|------|------|------|
| 1.90V | 160 | 153 | 118 | 91.6 | 76.1 | 62.5 | 52.8 | 44.8 | 37.4 |
| 1.85V | 173 | 171 | 124 | 99.8 | 80.7 | 67.4 | 56.5 | 47.3 | 40.2 |
| 1.80V | 189 | 175 | 131 | 104.9 | 83.3 | 71.0 | 61.5 | 48.4 | 41.5 |
| 1.75V | 215 | 182 | 136 | 107.2 | 84.7 | 72.1 | 62.5 | 49.3 | 42.0 |
| 1.70V | 237 | 188 | 139 | 108.9 | 85.9 | 72.9 | 63.1 | 49.6 | 42.4 |
| 1.65V | 244 | 190 | 142 | 109.5 | 86.4 | 73.2 | 63.5 | 49.7 | 42.5 |

Performance Curve



***Declaration:**

This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Contact CHINASHOTO for the latest information.

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