

Sealed Lead Acid Durable AGM Battery

GB12-90

CSBattery GB series AGM batteries are designed to have a large amount of stored current discharged between charging sessions, with very heavy non-porous battery plates to withstand repeated major discharging and charging cycle. The CSBattery VRLA AGM battery uses a different chemistry for the plates active paste material, and a slightly stronger electrolyte than normal battery electrolyte, thus the GB range features higher cyclic life with 10 years of float life when compared to the standard Duration range.

12V
90Ah

AGM
Technology

VRLA
Battery



Applications

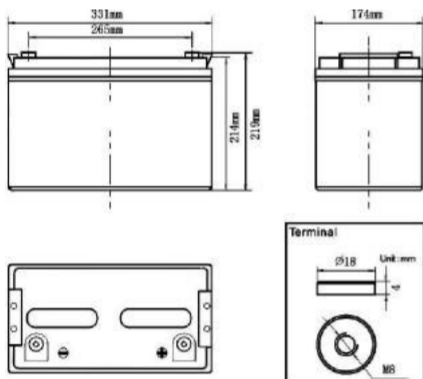
- Telecom Control Equipments
- UPS systems, Inverter
- Power Equipments
- Solar&Wind
- Emergency Power Systems

General Features

- ✓ 30% more cyclic life through innovation at the PAM additives
- ✓ Long life expectancy of 10 years in floating condition
- ✓ Thick flat plate with high Tin low Calcium alloy
- ✓ Excellent deep discharge recovery capability
- ✓ Deep cycle performance: up to 700 cycles@50%DOD

Dimensions & Weight

| | |
|-----------------------|-----------|
| Length(mm/inch) | 331/13.03 |
| Width(mm/inch) | 174/6.85 |
| Height(mm/inch) | 214/8.43 |
| Total Height(mm/inch) | 219/8.62 |
| Weight(kg/lbs)(±3%) | 25/55.2 |



Technical Specifications

| | | |
|---|---------------------------|--|
| Nominal Voltage | | 12V(6 cells per unit) |
| Design Floating Life @25°C | | 10 Years |
| Nominal Capacity @25°C (10 hour rate@9.00A,10.8V) | | 90Ah |
| Capacity @25°C | 20hour rate (5.00A,10.8V) | 100Ah |
| | 5 hour rate (16.4A,10.5V) | 82.0Ah |
| | 1 hour rate (59.9A,9.6V) | 59.9Ah |
| Internal Resistance | Full Charged Battery@25°C | ≤5.5mΩ |
| Ambient Temperature | Discharge | -15°C~45°C |
| | Charge | -15°C~45°C |
| | Storage | -15°C~45°C |
| Max.Discharge Current@25°C | | 540A (5s) |
| Capacity affected by Temperature (10 hour) | 40°C | 105% |
| | 25°C | 100% |
| | 0°C | 85% |
| | -15°C | 65% |
| Self-Discharge@25°C per Month | | 3% |
| Charge (Constant Voltage) @25°C | Stand By Use | Initial Charging Current Less than 22.5A Voltage 13.6-13.8V |
| | Cycle Use | Initial Charging Current Less than 22.5A Voltage 14.4-14.9V |

COMPLIED STANDARDS



Battery Discharge Table

Discharge Constant Current per Cell (Amperes at 25°C)

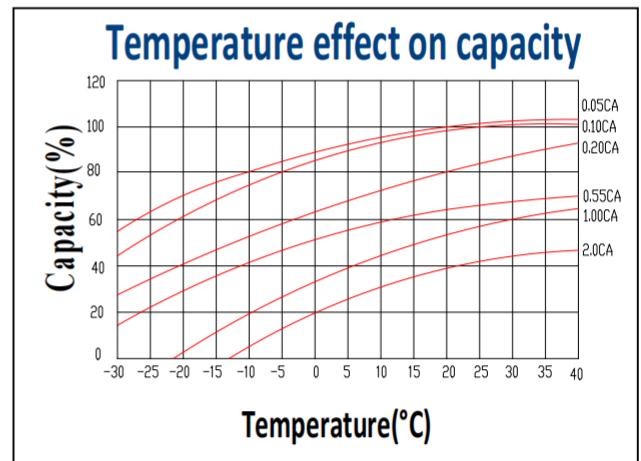
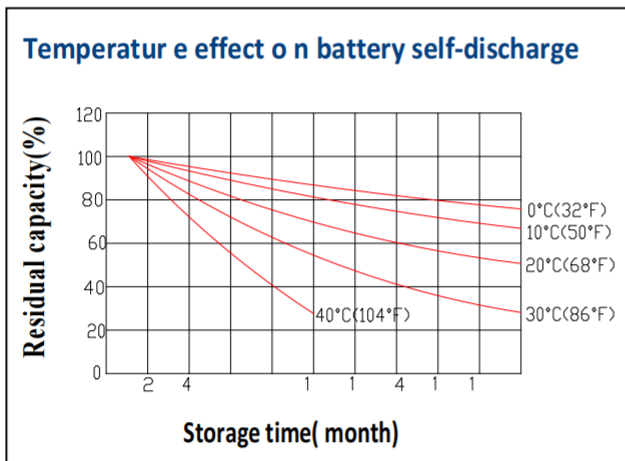
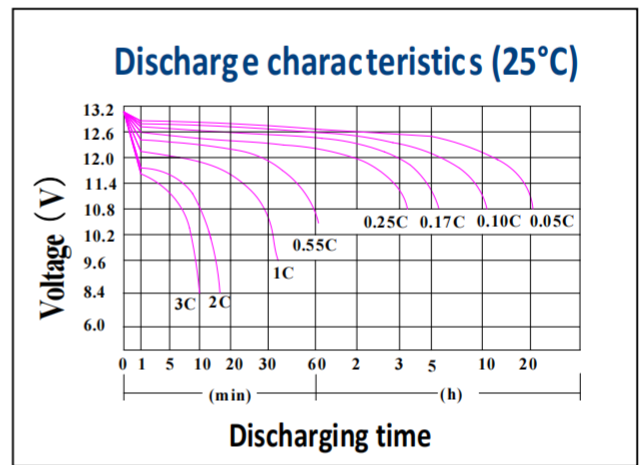
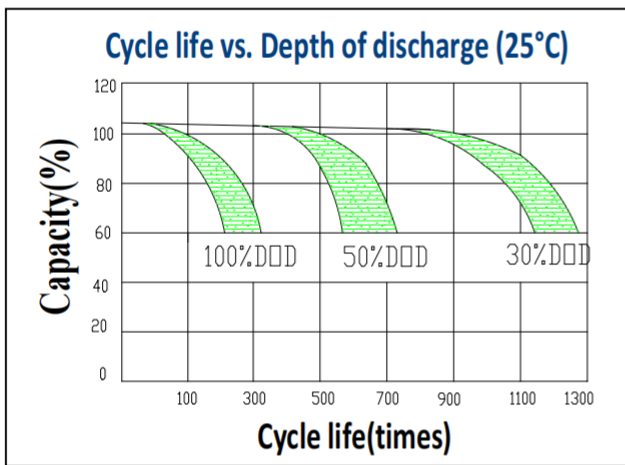
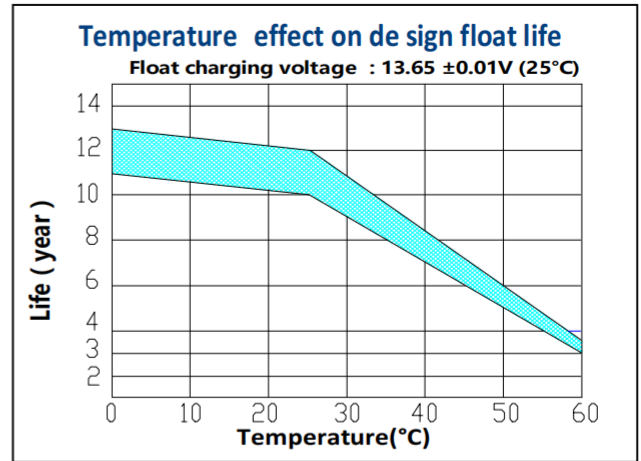
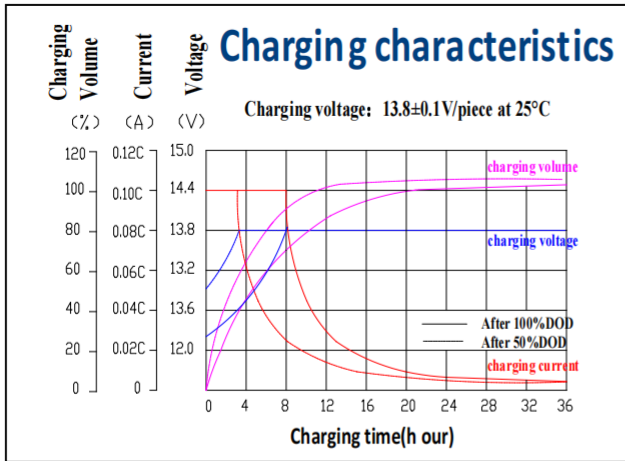
| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|------|------|------|------|------|------|------|
| 1.60V | 152.0 | 94.6 | 67.8 | 59.9 | 36.5 | 26.7 | 17.2 | 10.5 | 9.36 | 5.19 |
| 1.65V | 145.6 | 92.0 | 66.0 | 58.3 | 35.8 | 26.2 | 16.9 | 10.4 | 9.27 | 5.14 |
| 1.70V | 139.3 | 89.5 | 64.2 | 56.7 | 35.2 | 25.7 | 16.7 | 10.3 | 9.18 | 5.09 |
| 1.75V | 133.0 | 87.0 | 62.4 | 55.1 | 34.3 | 25.1 | 16.4 | 10.2 | 9.09 | 5.04 |
| 1.80V | 126.6 | 84.4 | 60.6 | 53.5 | 33.5 | 24.5 | 16.2 | 10.1 | 9.00 | 5.00 |

Discharge Constant Power per Cell (Watts at 25°C)

| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|------|------|------|------|------|-----|
| 1.60V | 283.4 | 176.3 | 126.5 | 111.7 | 68.1 | 49.8 | 32.0 | 19.6 | 17.5 | 9.7 |
| 1.65V | 271.6 | 171.6 | 123.1 | 108.7 | 66.8 | 48.9 | 31.6 | 19.4 | 17.3 | 9.6 |
| 1.70V | 259.8 | 166.9 | 119.7 | 105.7 | 65.6 | 47.9 | 31.1 | 19.2 | 17.1 | 9.5 |
| 1.75V | 248.0 | 162.2 | 116.4 | 102.7 | 64.0 | 46.8 | 30.7 | 19.0 | 17.0 | 9.4 |
| 1.80V | 236.2 | 157.4 | 113.0 | 99.7 | 62.4 | 45.7 | 30.2 | 18.8 | 16.8 | 9.3 |

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **CSBattery** for the latest information.

Performance Characteristics



Battery Construction

| Component | Positive plate | Negative plate | Container & Cover | Safety valve | Terminal | Separator | Electrolyte | Pillar seal |
|-----------|--|---|-------------------------------|--------------------------------------|-------------------------|--|----------------------------------|-----------------------------|
| Features | Thick high Sn low Ca grid with special paste | Balanced Pb-Ca grid for improved recombination efficiency | Fire resistance ABS (UL94-V0) | Flame Si-Rubber and aging resistance | Female Copper Insert M8 | Advanced AGM separator for high pressure cell design | Dilute high purity sulfuric acid | Two layers epoxy resin seal |

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