

SPECIFICATION: CG12-33XA (12V33Ah)

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Gel battery shows some distinctive advantages over flooded battery or AGM battery, such as super thermal stability, high deep discharge capability, good recovery from deep discharge, even if the battery is left discharged for thirty days, it will still recover to 100% of capacity. With the above-mentioned advantages, the gel battery has long service life, is specially suitable for motive power applications, such as golf trailer, scrubber, forklift, etc. The deep discharge cycles increased 50% as compared with the AGM battery.

GENERAL FEATURES

- l Micro millimeter SiO₂ and H₂SO₄ gelled electrolyte technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- l Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- l UL-recognized component.
- l Can be mounted in any orientation.
- l Computer designed lead, calcium tin alloy grid for high power density.
- l Long service life, float or cyclic applications.
- l Maintenance-free operation.
- l Low self discharge.
- l Case and cover available in both standard and flame retardant ABS.

CONSTRUCTION

| Component | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator | Electrolyte |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|-------------|
| Raw material | Lead dioxide | Lead | ABS | ABS | Rubber | Pb | Fiberglass | Gelled acid |

TECHNOLOGY PARAMETER

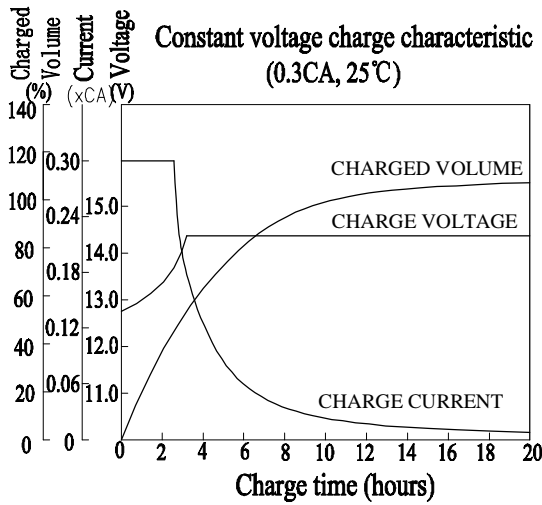
| | | | | |
|----------------------------------|---|--------------------|-------------------|-------------------|
| Battery model | CG12-33XA | | | |
| Nominal voltage | 12V | | | |
| Number of cell | 6 | | | |
| Capacity (25°C) | 20hR(1.65A, 10.5V) | 10hR(2.98A, 10.5V) | 5hR(5.55A, 10.5V) | 1hR(22.4A, 9.60V) |
| | 33Ah | 29.8Ah | 27.75Ah | 22.4Ah |
| Dimensions. | Length | Width | Height | Total Height |
| | 195±1mm | 130±1mm | 155±1mm | 168±1mm |
| Approx. weight | 11.0Kg(24.3lbs) (Weight deviation: ± 3%) | | | |
| Internal resistance | Full charged at 25°C: ≤ 10.3mOhms | | | |
| Self discharge | 3% of capacity declined per month at 20°C (average) | | | |
| Operating temperature range | Discharge | Charge | | Storage |
| | -20~60°C | -10~60°C | | -20~60°C |
| Max. discharge current (25°C) | 330A (5s) | | | |
| Short circuit current | 850A | | | |

Constant current discharge rating-amperes at 25°C(77 °F)

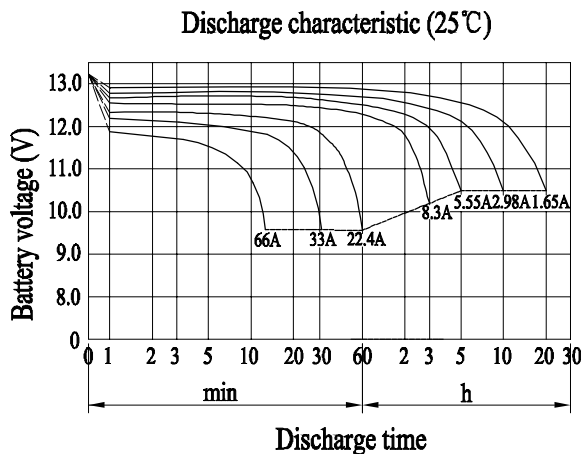
| End Point Volts/Cell | 5min | 10min | 15min | 30min | 1h | 3h | 5h | 10h | 20h |
|----------------------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V | 114 | 76.8 | 60.8 | 33.4 | 22.4 | 8.90 | 6.01 | 3.27 | 1.70 |
| 1.65V | 108 | 73.2 | 58.1 | 32.0 | 21.6 | 8.60 | 5.92 | 3.18 | 1.70 |
| 1.70V | 102 | 69.2 | 55.2 | 30.7 | 20.9 | 8.30 | 5.72 | 3.07 | 1.70 |
| 1.75V | 96.0 | 65.5 | 52.5 | 29.1 | 19.9 | 8.03 | 5.55 | 2.98 | 1.65 |
| 1.80V | 89.7 | 61.5 | 49.4 | 27.6 | 18.8 | 7.62 | 5.38 | 2.87 | 1.60 |

Constant power discharge rating-watts per cell at 25°C(77 °F)

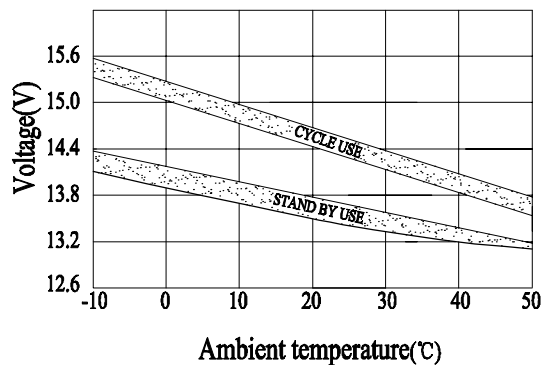
| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V | 204 | 139 | 111 | 62.3 | 50.0 | 41.9 | 23.2 | 16.9 | 11.5 |
| 1.65V | 195 | 133 | 107 | 60.0 | 48.4 | 40.7 | 22.5 | 16.4 | 11.4 |
| 1.70V | 184 | 127 | 102 | 57.9 | 46.8 | 39.5 | 21.8 | 15.9 | 11.1 |
| 1.75V | 175 | 121 | 97.5 | 55.3 | 44.8 | 37.8 | 21.0 | 15.5 | 10.8 |
| 1.80V | 164 | 114 | 92.3 | 52.7 | 42.6 | 36.1 | 20.0 | 14.8 | 10.5 |



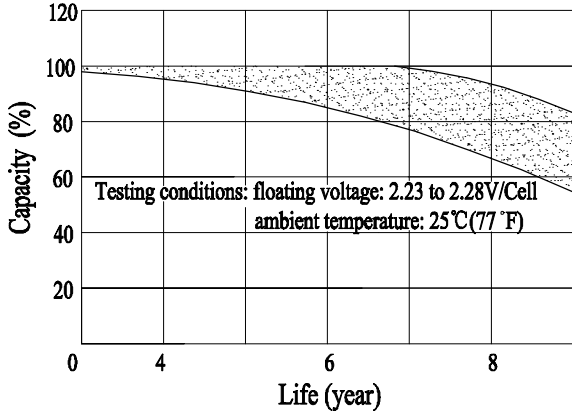
CHARGING METHODS: Constant voltage charging at 25°C
 Standby use: No charging current limit is required
 Charging voltage: 2.20-2.30VPC
 Cyclic use: Maximum charging current: 30% of rated capacity
 Charging voltage: 2.40-2.45VPC
 Temperature compensation :
 stand by -20mV/°C; cyclic use -30mV/°C



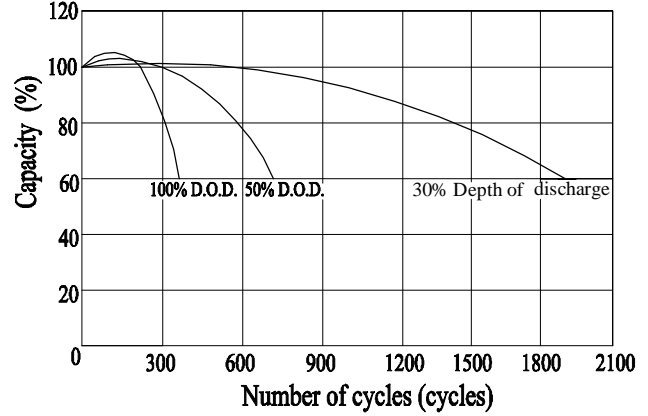
Relationship between charge voltage and temperature



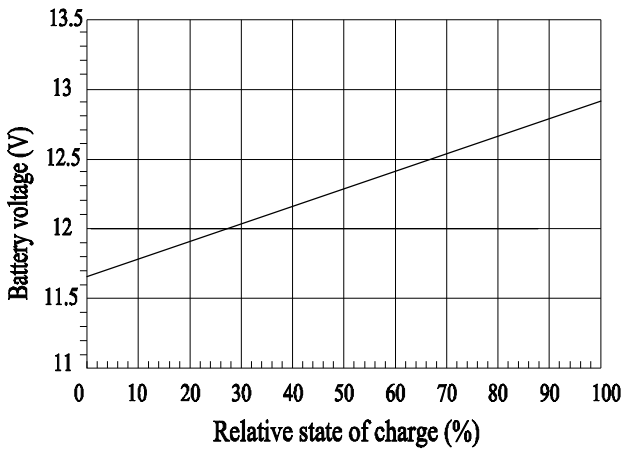
Life characteristics of standby use



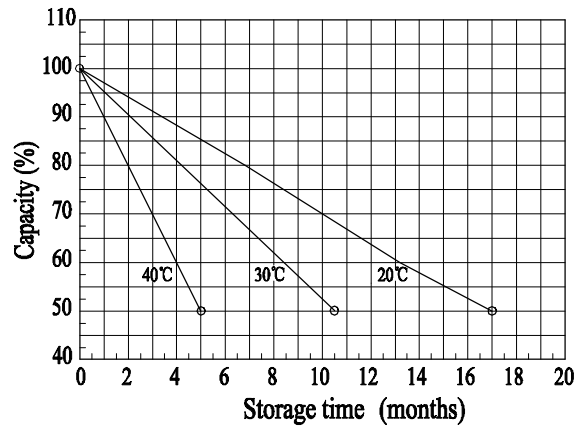
Cycle service life in relation to depth of discharge



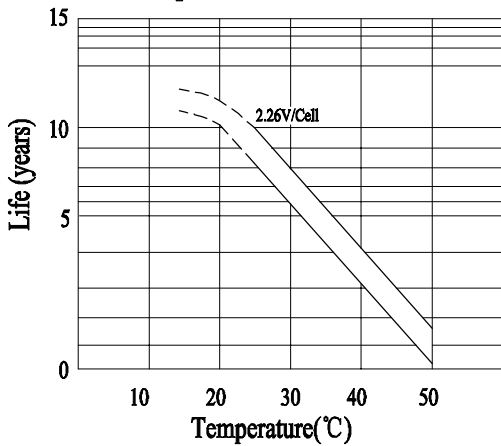
Relationship of OCV and state of charge (25°C)



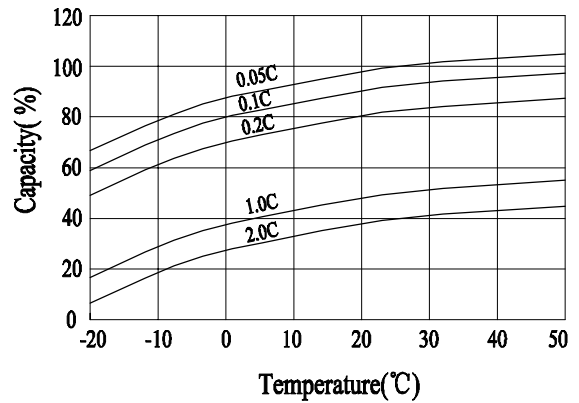
Self-discharge characteristic



Temperature effects on float life



Temperature effects on capacity



Battery and terminal dimensions

