# GPL500-2 2V500AH

**Rechargeable Valve Regulated lead-Acid Battery**

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special oneway valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

## Battery Construction

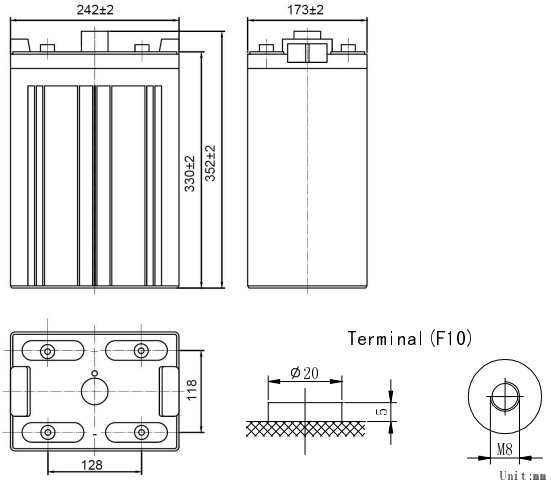
| Component | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator | Electrolyte |
|---|---|---|---|---|---|---|---|---|
| Raw material | Lead dioxide | Lead | ABS | ABS | Rubber | Copper | Fiberglass | Sulfuric acid |

## General Feature

- Absorbent Glass Mat(AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

## SPECIFICATION

Nominal voltage ····· 2V
Number of cell ····· 1
Length(mm/inch) ····· 242/9.53
Width(mm/inch ····· 173/6.81
Height(mm/inch) ····· 330/13.0
Total Height(mm/inch) ····· 365/14.4
Approx. Weight(kg/lbs) ····· 32/70.5




Total height with removable cover:367

## Performance Characteristics

| | | |
|---|---|---|
| Capacity 77°F(25℃) | 10 hour rate (50A、1.80V) | 500Ah |
| | 5 hour rate (88A、1.75V) | 440Ah |
| | 3 hour rate (126A、1.70V) | 378Ah |
| | 1 hour rate (300A、1.60V) | 300Ah |
| Internal Resistance | Full charged Battery77°F(25℃)：0.8mΩ | |
| Capacity affected by Temperature (10 hour rate) | 104° F(40℃) | 102% |
| | 77° F(25℃) | 100% |
| | 32° F(10℃) | 85% |
| | 5° F(-15℃) | 65% |
| Self-Discharge 68°F(20℃) | Capacity after 3 month storage | 90% |
| | Capacity after 6 month storage | 80% |
| | Capacity after 12month storage | 60% |
| Max. discharge current77°F(25℃): 2000A(5S) | | |
| Charge (Constant Voltage) | Float：2.25～2.30 V/77° F/(25℃) | |
| | Cycle:2.35～2.45 V/77°F/(25℃)<br>Max. Current：100A | |

Discharge Constant Current (Amperes at 77° F25 ℃)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h | 3h | 5h | 10h |
|---|---|---|---|---|---|---|---|---|---|
| 1.60V | | 937 | 711 | 500 | 383 | 300 | 134 | 94.5 | 53.8 |
| 1.65V | | 888 | 677 | 480 | 368 | 290 | 130 | 92.5 | 53.1 |
| 1.70V | | 837 | 642 | 460 | 352 | 278 | 126 | 90.5 | 52.2 |
| 1.75V | | 785 | 606 | 432 | 335 | 266 | 122 | 88.0 | 51.2 |
| 1.80V | | 733 | 570 | 405 | 317 | 253 | 115 | 85.0 | 50.0 |

Discharge Constant Power (watts at 77° F 25℃)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h |
|---|---|---|---|---|---|---|---|---|---|
| 1.60V | | 1546 | 1156 | 930 | 771 | 625 | 378 | 270 | 167 |
| 1.65V | | 1457 | 1094 | 883 | 736 | 599 | 361 | 260 | 164 |
| 1.70V | | 1366 | 1030 | 836 | 699 | 572 | 345 | 247 | 161 |
| 1.75V | | 1276 | 967 | 787 | 661 | 543 | 330 | 236 | 157 |
| 1.80V | | 1187 | 903 | 738 | 623 | 514 | 304 | 217 | 149 |

(Note)The above characteristics data are average values obtained Within three charge/discharge cycles not the minimum values.

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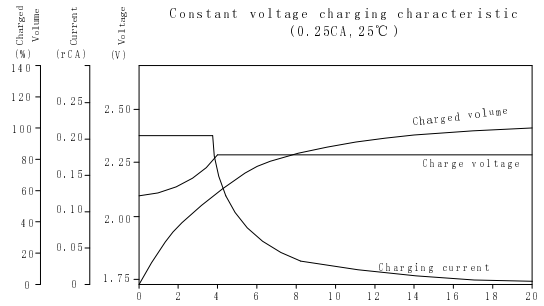
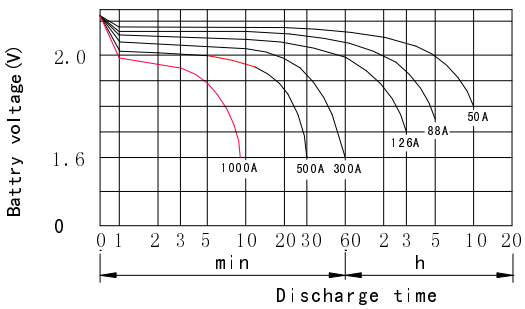
**Rechargeable Valve Regulated lead-Acid Battery**

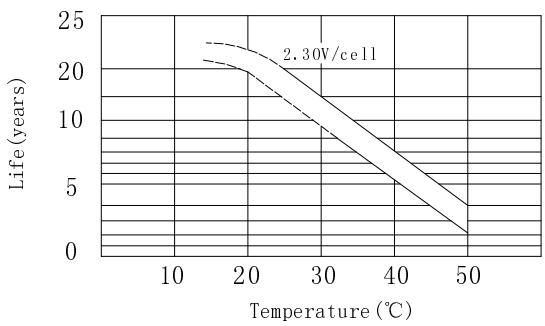
charge characteristic curve



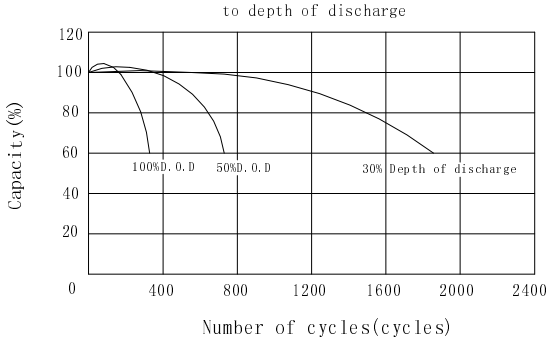

Discharge characteristic(25℃)



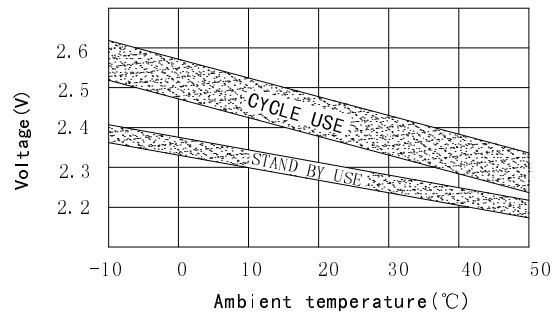

Temperature effects on float life



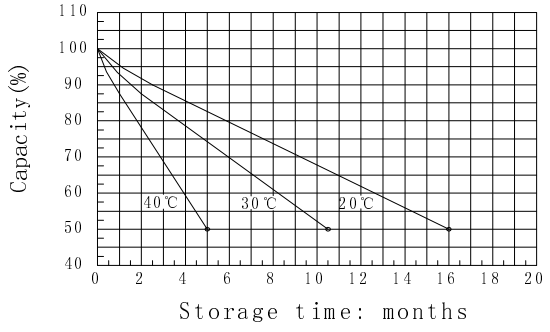

Cycle service life in relation to depth of discharge



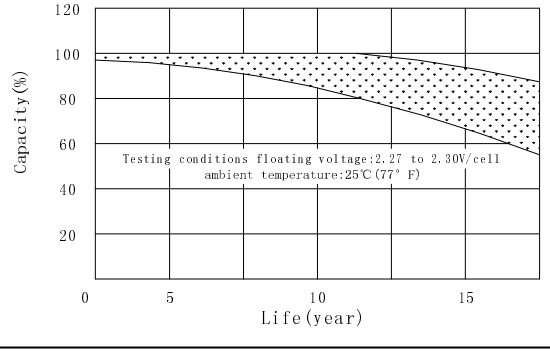

Relationship between charging voltage and temperature



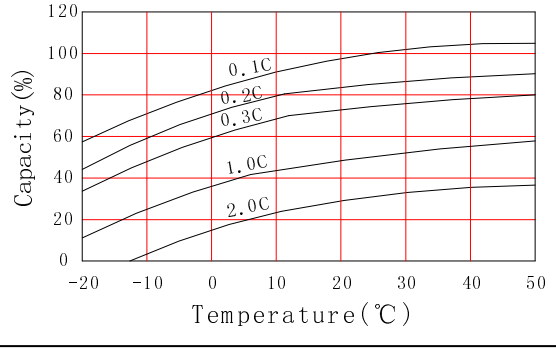

Self-discharge characteristic




Life characteristics of standby use




Temperature effects on capacity





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