

# CP1228A 12V 2.8Ah(20hr)



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 one-way 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

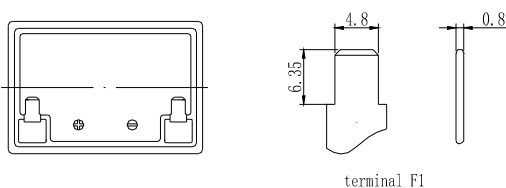
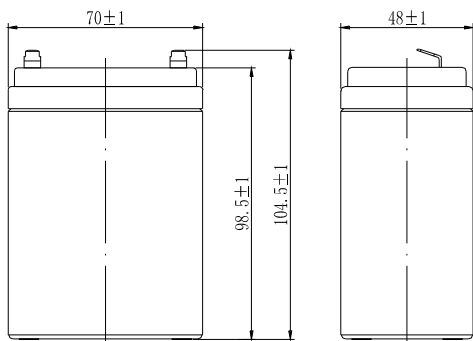
| Component    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead          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

## General Features

- 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.

## Dimensions and Weight

|                          |              |
|--------------------------|--------------|
| Length(mm / inch)        | 70 / 2.76    |
| Width(mm / inch)         | 48 / 1.89    |
| Height(mm / inch)        | 98.5 / 3.88  |
| Total Height(mm / inch)  | 104.5 / 4.11 |
| Approx. Weight(Kg / lbs) | 0.82 / 1.81  |



## Performance Characteristics

|  |              |
|--|--------------|
| Nominal Voltage                                    | 12V          |
| Number of cell                                     | 6            |
| Design Life  | 5 years      |
| Nominal Capacity 77°F(25°C)                        |              |
| 20 hour rate (0.14A, 10.5V)                        | 2.8Ah        |
| 10 hour rate (0.25A, 10.5V)                        | 2.5Ah        |
| 5 hour rate (0.39A, 10.5V)                         | 1.95Ah       |
| 1 hour rate (1.64A, 9.6V)                          | 1.64Ah       |
| Internal Resistance                                |              |
| Fully Charged battery 77°F(25°C)                   | 58mOhms      |
| Self-Discharge                                     |              |
| 3% of capacity declined per month at 20°C(average) |              |
| Operating Temperature Range                        |              |
| Discharge  | -20~60°C     |
| Charge   | -10~60°C     |
| Storage  | -20~60°C     |
| Max. Discharge Current 77°F(25°C)                  | 42A(5s)      |
| Short Circuit Current                              | 140A         |
| Charge Methods: Constant Voltage Charge 77°F(25°C) |              |
| Cycle use  | 2.40-2.45VPC |
| Maximum charging current                           | 1.12A        |
| Temperature compensation                           | -30mV/°C     |
| Standby use  | 2.23-2.27VPC |
| Temperature compensation                           | -20mV/°C     |

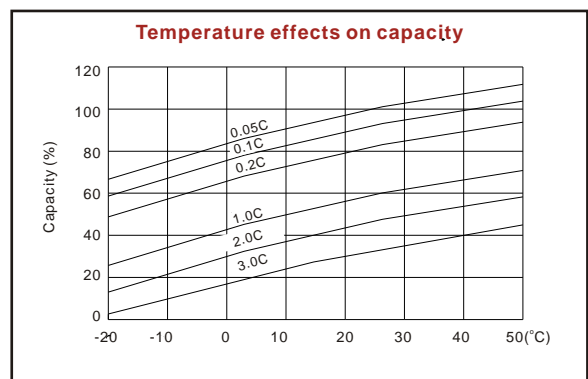
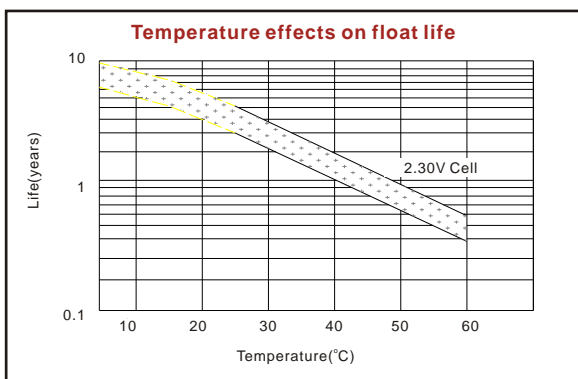
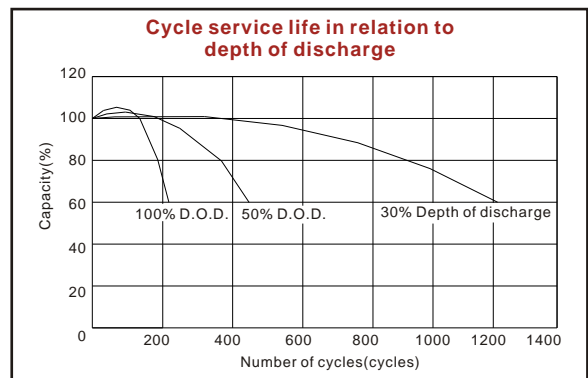
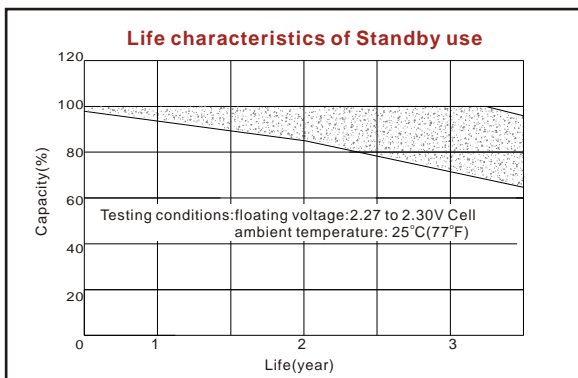
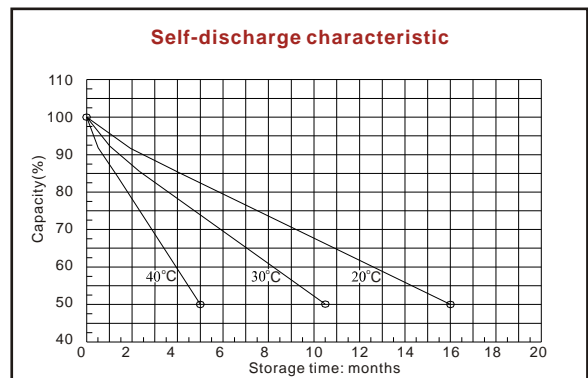
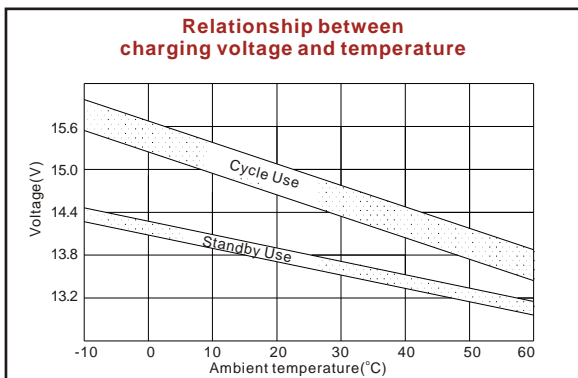
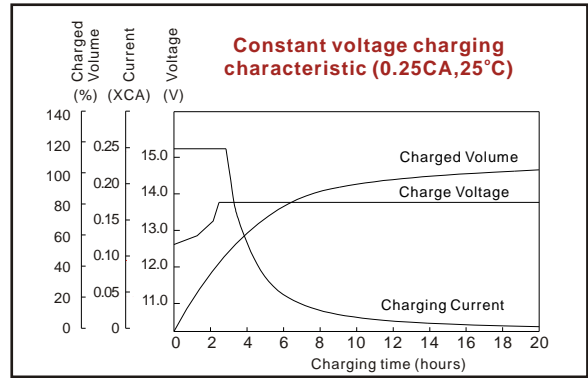
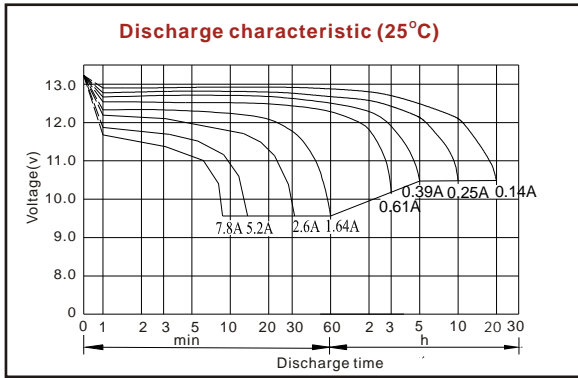
## Discharge Constant Current (Amperes at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h   | 20h   |
|----------------------|------|-------|-------|-------|------|------|------|-------|-------|
| 1.60V                | 9.4  | 6.84  | 4.78  | 2.70  | 1.64 | 0.65 | 0.42 | 0.262 | 0.15  |
| 1.65V                | 8.9  | 6.52  | 4.54  | 2.59  | 1.58 | 0.63 | 0.41 | 0.26  | 0.15  |
| 1.70V                | 8.4  | 6.17  | 4.32  | 2.48  | 1.52 | 0.61 | 0.40 | 0.255 | 0.145 |
| 1.75V                | 7.9  | 5.83  | 4.07  | 2.36  | 1.45 | 0.59 | 0.39 | 0.25  | 0.14  |
| 1.80V                | 7.4  | 5.48  | 3.83  | 2.23  | 1.38 | 0.56 | 0.38 | 0.24  | 0.13  |

## Discharge Constant Power (Watts at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V                | 17.5 | 12.5  | 9.50  | 5.20  | 3.97  | 3.20 | 1.87 | 1.30 | 0.90 |
| 1.65V                | 16.7 | 12.0  | 9.14  | 5.02  | 3.84  | 3.10 | 1.82 | 1.27 | 0.88 |
| 1.70V                | 15.8 | 11.4  | 8.73  | 4.83  | 3.70  | 3.00 | 1.76 | 1.23 | 0.87 |
| 1.75V                | 15.0 | 10.8  | 8.36  | 4.63  | 3.55  | 2.88 | 1.71 | 1.20 | 0.85 |
| 1.80V                | 14.1 | 10.2  | 7.90  | 4.39  | 3.38  | 2.75 | 1.63 | 1.14 | 0.83 |

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



ISO9001:2000

MH25860

G4M19906-9202-E-16

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