

## CP12200 12V 20Ah(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

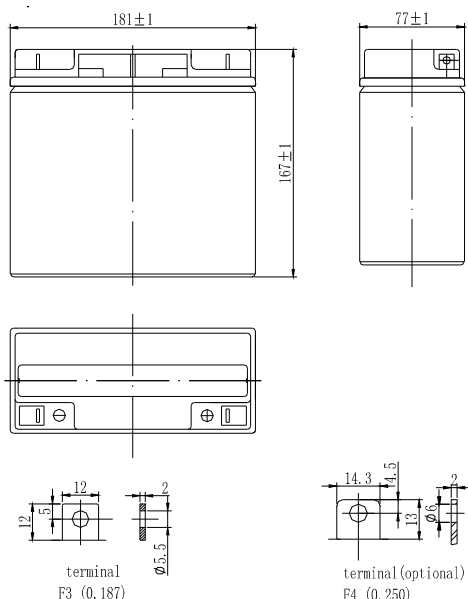
| Component    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead           | 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)        | 181 / 7.13 |
| Width(mm / inch)         | 77 / 3.03  |
| Height(mm / inch)        | 167 / 6.57 |
| Total Height(mm / inch)  | 167 / 6.57 |
| Approx. Weight(Kg / lbs) | 5.9 / 13   |



### Performance Characteristics

|                                                    |            |
|----------------------------------------------------|------------|
| Nominal Voltage                                    | 12V        |
| Number of cell                                     | 6          |
| Design Life                                        | 10 years   |
| Nominal Capacity 77°F(25°C)                        |            |
| 20 hour rate (1A, 10.5V)                           | 20Ah       |
| 10 hour rate (1.85A, 10.5V)                        | 18.5Ah     |
| 5 hour rate (3.45A, 10.5V)                         | 17.25Ah    |
| 1 hour rate (13.4A, 9.6V)                          | 13.4Ah     |
| Internal Resistance                                |            |
| Fully Charged battery 77°F(25°C)                   | 15mOhms    |
| 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)                  | 300A(5s)   |
| Short Circuit Current                              | 1000A      |
| Charge Methods: Constant Voltage Charge 77°F(25°C) |            |
| Cycle use                                          | 14.5-14.9V |
| Maximum charging current                           | 8A         |
| Temperature compensation                           | -30mV/°C   |
| Standby use                                        | 13.6-13.8V |
| Temperature compensation                           | -20mV/°C   |

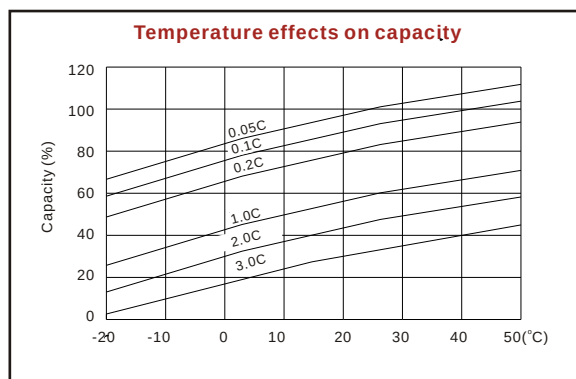
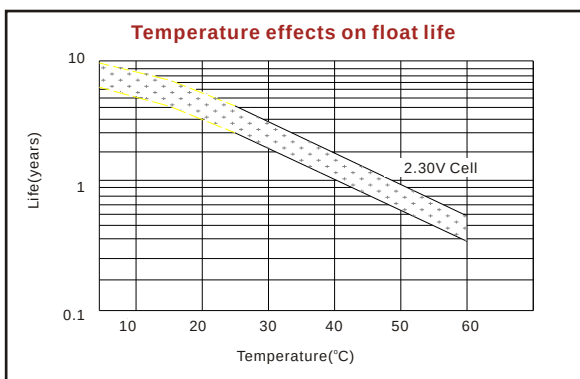
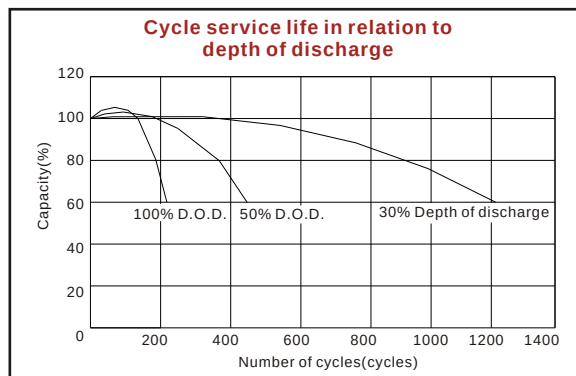
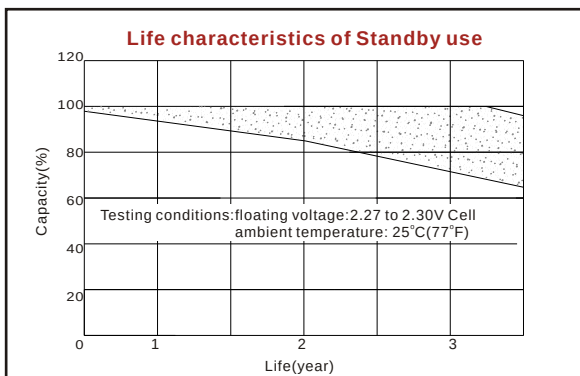
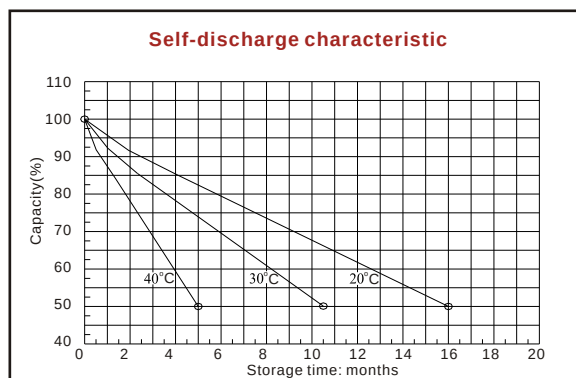
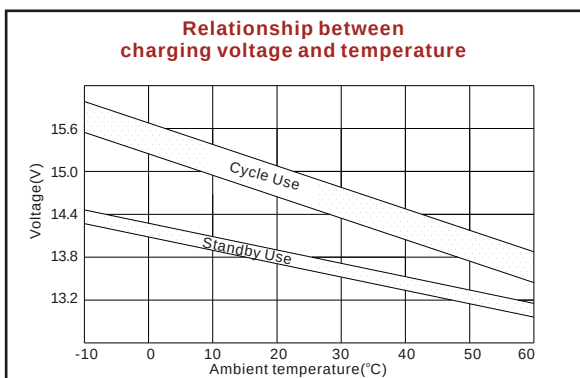
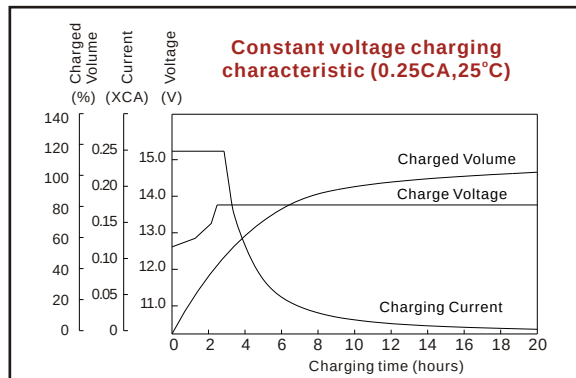
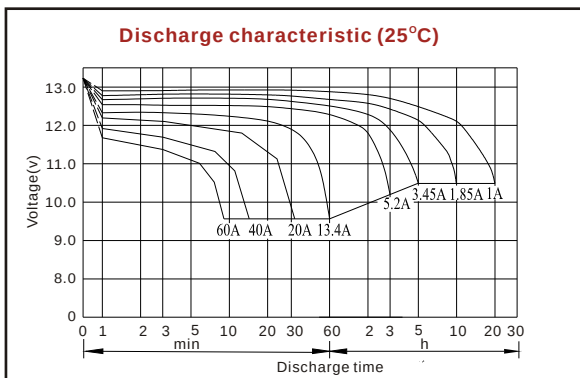
### Discharge Constant Current (Amperes at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h  | 20h  |
|----------------------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V                | 75.0 | 51.2  | 39.6  | 22.4  | 13.4 | 5.36 | 3.72 | 1.93 | 1.07 |
| 1.65V                | 73.3 | 49.9  | 38.7  | 22.1  | 13.2 | 5.28 | 3.63 | 1.93 | 1.07 |
| 1.70V                | 71.5 | 48.7  | 37.8  | 21.7  | 13.0 | 5.20 | 3.54 | 1.90 | 1.04 |
| 1.75V                | 69.7 | 47.4  | 36.9  | 21.4  | 12.8 | 5.11 | 3.45 | 1.85 | 1.00 |
| 1.80V                | 67.9 | 46.1  | 36.0  | 21.0  | 12.5 | 5.03 | 3.36 | 1.76 | 0.95 |

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

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V                | 137  | 95    | 75.6  | 42.7  | 32.8  | 25.5 | 15.3 | 10.6 | 7.27 |
| 1.65V                | 132  | 93    | 74.3  | 42.1  | 32.4  | 25.2 | 15.2 | 10.5 | 7.18 |
| 1.70V                | 128  | 91    | 73.0  | 41.5  | 32.0  | 25.0 | 15.0 | 10.4 | 7.09 |
| 1.75V                | 123  | 89.4  | 71.8  | 40.9  | 31.6  | 24.7 | 14.8 | 10.3 | 7.00 |
| 1.80V                | 119  | 88.0  | 70.5  | 40.3  | 31.2  | 24.5 | 14.6 | 10.2 | 6.99 |

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



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