

# BG-1212F1

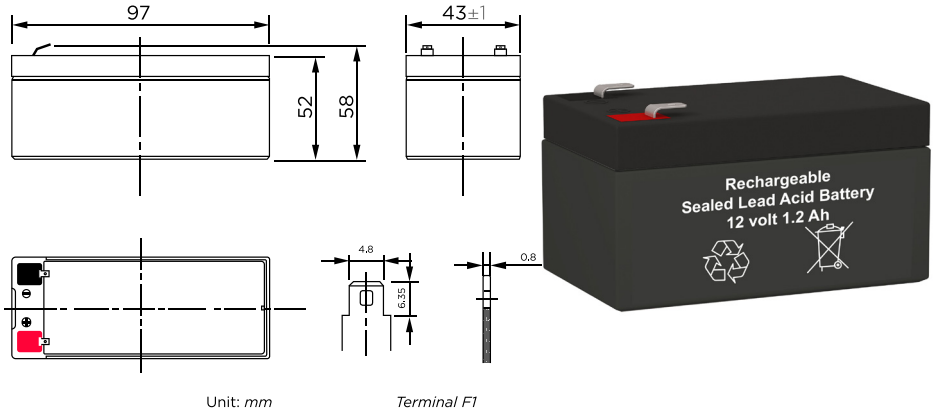
(12V 1.2Ah/20hr)

Rechargeable Sealed Lead Acid Battery



Technical Specification Sheet

These rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators 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.



Unit: mm

Terminal F1

## Performance Characteristics

|  |  |        |
|--|--|--------|
| <b>Capacity 77°F(25°C)</b>                             | 20 hour rate (0.06A, 10.5V)                          | 1.2Ah  |
|  | 10 hour rate (0.115A, 10.5V)                         | 1.15Ah |
|  | 5 hour rate (0.22A, 10.5V)                           | 1.1Ah  |
|  | 1 hour rate (0.81A, 9.6V)                            | 0.81Ah |
| <b>Internal Resistance</b>                             | Full charged Battery 77°F(25°C):120mΩ                |        |
| <b>Capacity affected by Temperature (20 hour rate)</b> | 104°F(40°C)  | 102%   |
|  | 77°F(25°C)   | 100%   |
|  | 32°F(10°C)   | 85%    |
|  | 5°F(-15°C)   | 65%    |
| <b>Self-Discharge 68°F(20°C)</b>                       | Capacity after 3 month storage                       | 90%    |
|  | Capacity after 6 month storage                       | 80%    |
|  | Capacity after 12month storage                       | 60%    |
| <b>Max. discharge current 77°F(25°C): 18A(5S)</b>      |  |        |
| <b>Charge (Constant Voltage)</b>                       | Float: 13.6-13.8 V/77°F/(25°C)                       |        |
|  | Cycle: 14.5-14.9 V/77°F/(25°C)<br>Max. Current: 0.3A |        |

## SPECIFICATION

|                               |           |
|-------------------------------|-----------|
| <b>Nominal voltage</b>        | 12V       |
| <b>Number of cells</b>        | 6         |
| <b>Length (mm/inch)</b>       | 97/3.82   |
| <b>Width (mm/inch)</b>        | 43/1.69   |
| <b>Height (mm/inch)</b>       | 52/2.05   |
| <b>Total Height (mm/inch)</b> | 58/2.28   |
| <b>Approx.Weight (kg/lbs)</b> | 0.59/1.30 |

## 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.

## Discharge Constant Current (Amperes at 77°F 25°C)

| End Points Volts/Cell | 5 min | 10 min | 15 min | 30 min | 1h   | 3h   | 5h   | 10h   | 20h  |
|-----------------------|-------|--------|--------|--------|------|------|------|-------|------|
| 1.60V                 | 5.20  | 3.50   | 2.43   | 1.35   | 0.81 | 0.35 | 0.24 | 0.126 | 0.07 |
| 1.65V                 | 4.93  | 3.33   | 2.32   | 1.30   | 0.78 | 0.34 | 0.23 | 0.123 | 0.06 |
| 1.70V                 | 4.65  | 3.16   | 2.21   | 1.24   | 0.75 | 0.33 | 0.23 | 0.118 | 0.06 |
| 1.75V                 | 4.36  | 2.98   | 2.10   | 1.18   | 0.72 | 0.31 | 0.22 | 0.115 | 0.06 |
| 1.80V                 | 4.07  | 2.80   | 1.98   | 1.12   | 0.69 | 0.30 | 0.21 | 0.113 | 0.06 |

## Discharge Constant Power (Watts at 77°F 25°C)

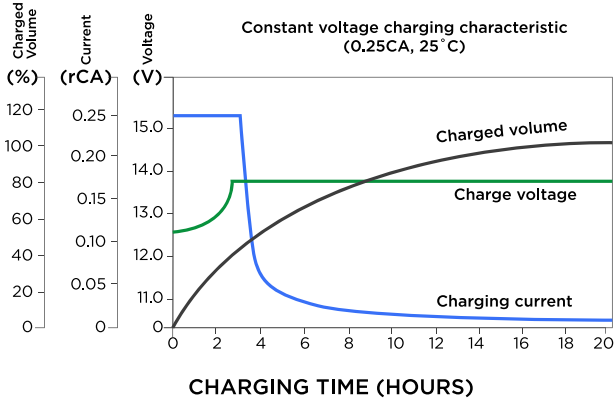
| End Points Volts/Cell | 5 min | 10 min | 15 min | 30 min | 45 min | 1h   | 2h   | 3h   | 5h   |
|-----------------------|-------|--------|--------|--------|--------|------|------|------|------|
| 1.60V                 | 9.00  | 5.67   | 4.67   | 2.67   | 2.07   | 1.63 | 0.88 | 0.66 | 0.48 |
| 1.65V                 | 8.44  | 5.34   | 4.41   | 2.53   | 1.97   | 1.56 | 0.85 | 0.65 | 0.47 |
| 1.70V                 | 7.88  | 5.01   | 4.16   | 2.40   | 1.87   | 1.49 | 0.81 | 0.63 | 0.46 |
| 1.75V                 | 7.33  | 4.68   | 3.90   | 2.26   | 1.77   | 1.42 | 0.76 | 0.61 | 0.45 |
| 1.80V                 | 6.79  | 4.35   | 3.64   | 2.12   | 1.67   | 1.34 | 0.71 | 0.60 | 0.44 |

## Battery Construction

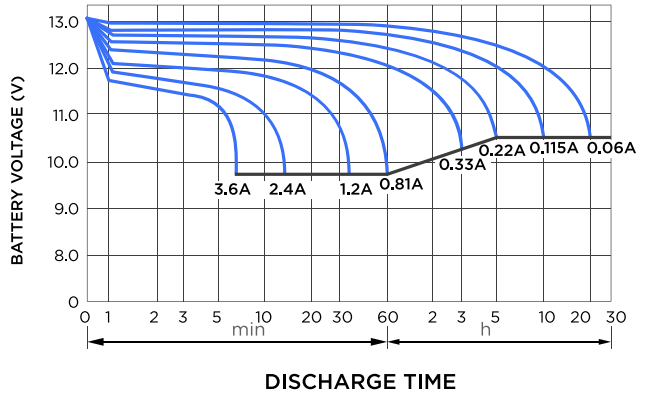
| Component    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead          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



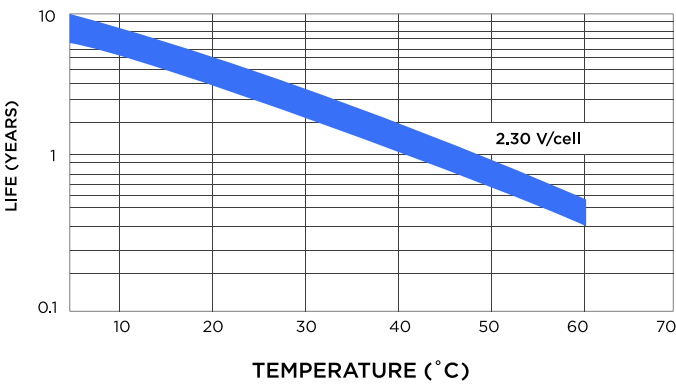
### Charge characteristic curve



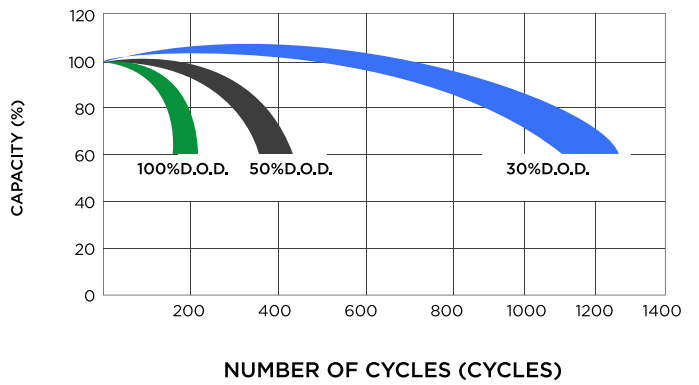
### Discharge characteristic (25°C)



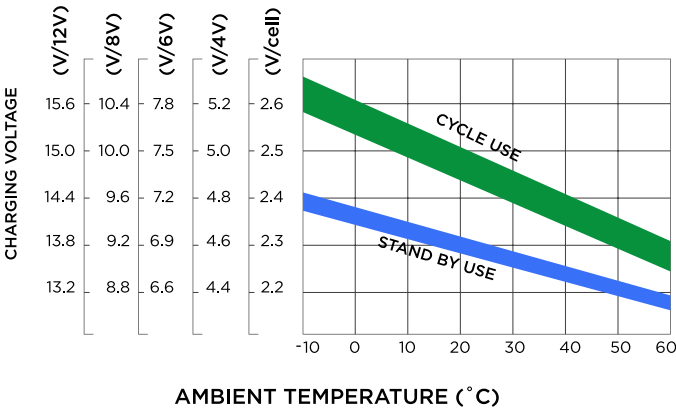
### Temperature effects on float life



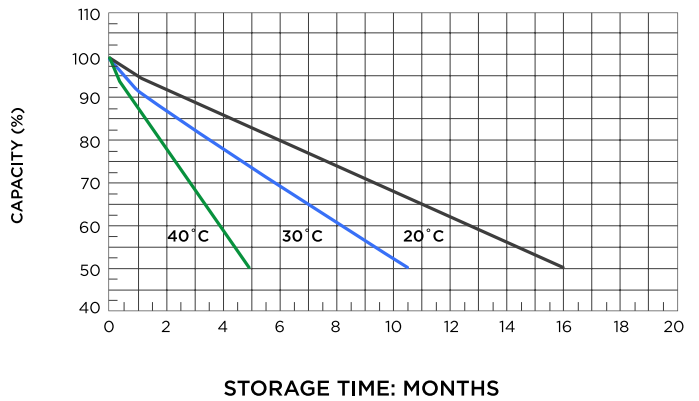
### Cycle service life in relation to depth of discharge



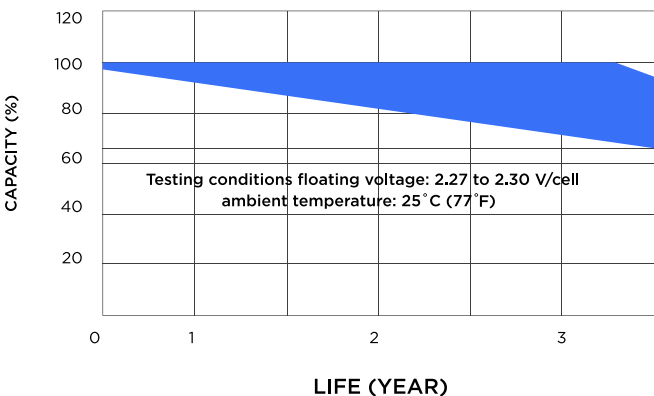
### Relationship between charging voltage and temperature



### Self-discharge characteristic



### Life characteristics of standby use



### Temperature effects on capacity

