

## Gel Series

Gel series batteries are designed to meet the requirements of frequent cyclic and high temperature applications such as broadband, PVs etc through up-to-date gel technologies. BSB Gel batteries uses German origin high purity fumed silica to form sulfuric acid thixotropic Gel and fills to the batteries with vacuum to ensure the fully penetration of electrolyte through separators and plates pastes.

## Application

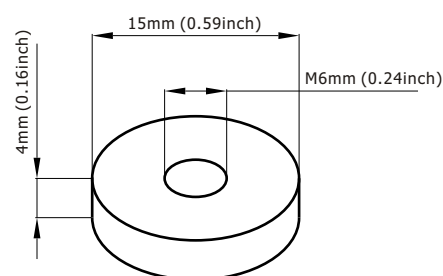
- Alarm System
- Cable Television
- Communication Equipment
- Control Equipment
- Security System
- Medical Equipment
- UPS
- Power tools
- Emergency Power System
- Toys

## General Features

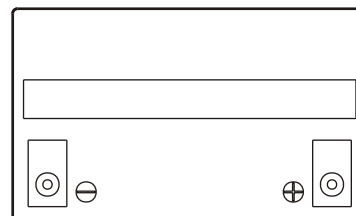
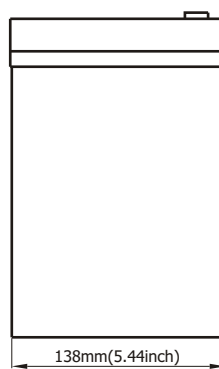
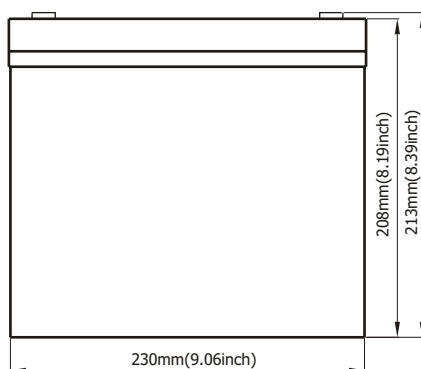
- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

## Construction

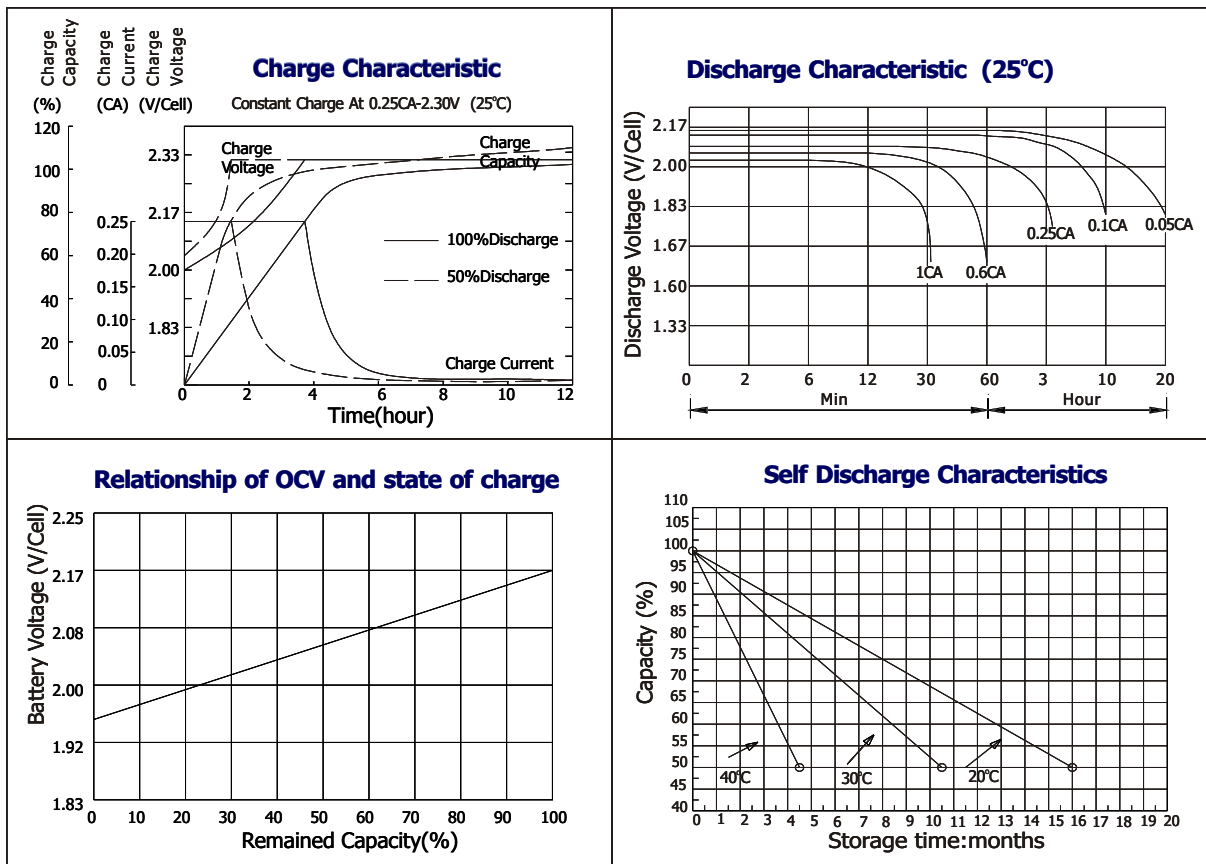
|           |                   |              |                                    |
|-----------|-------------------|--------------|------------------------------------|
| Component | .....Raw material | Sealant      | .....Epoxy Resin                   |
| Positive  | .....Lead dioxide | Safety valve | .....EPDR                          |
| Negative  | .....Lead         | Terminal     | .....Copper                        |
| Container | .....ABS          | Separator    | .....Macromolecule polymer         |
| Cover     | .....ABS          | Electrolyte  | .....sulfuric acid thixotropic Gel |



**Terminal Dimensions**



| Battery Model                    | GEL12-55                                        |                  |                       |                 |
|----------------------------------|-------------------------------------------------|------------------|-----------------------|-----------------|
| Designed Life                    | 10 Years (Floating) or > 750 Cycles @ 50% D.O.D |                  |                       |                 |
| Capacity(25°C)                   | 20HR(2.85A,1.75V)                               | 10HR(5.5A,1.75V) | 5HR(9A,1.75V)         | 1HR(33A,1.75V)  |
|                                  | 57AH                                            | 55AH             | 45AH                  | 33AH            |
| Dimensions                       | Length                                          | Width            | Height                | Total Height    |
|                                  | 230mm(9.06inch)                                 | 138mm(5.44inch)  | 208mm(8.19inch)       | 213mm(8.39inch) |
| Approx. Weight                   | 17.3Kg (38.15 lbs)                              |                  |                       |                 |
| Internal Resistance              | Full charged at 25°C: 0.006 Ohm                 |                  |                       |                 |
| Self Discharge                   | 3% of capacity declined per month at (25°C)     |                  |                       |                 |
| Capacity Affected by Temp.(20HR) | 40°C                                            | 25°C             | 0°C                   | -15°C           |
|                                  | 102%                                            | 100%             | 85%                   | 65%             |
| Charge Voltage(25°C)             | Cycle use                                       |                  | Float use             |                 |
|                                  | 14.4-15V(-30mV/ °C), max. Current: 13.75A       |                  | 13.6-13.8V(-20mV/ °C) |                 |



#### Constant current discharge ratings-amperes at 25°C

| F. V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR  | 3HR  | 5HR  | 10HR | 20HR |
|-----------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V     | 193  | 132   | 96.3  | 57.8  | 36.3 | 15.0 | 10.5 | 5.83 | 2.90 |
| 1.67V     | 173  | 120   | 93.5  | 56.1  | 36.2 | 15.0 | 10.4 | 5.74 | 2.89 |
| 1.70V     | 164  | 116   | 90.2  | 55.0  | 36.1 | 15.0 | 10.4 | 5.70 | 2.89 |
| 1.75V     | 146  | 107   | 85.3  | 53.9  | 35.8 | 14.9 | 10.3 | 5.60 | 2.88 |
| 1.80V     | 132  | 100   | 81.4  | 52.3  | 35.3 | 14.8 | 10.2 | 5.50 | 2.77 |
| 1.85V     | 100  | 82.0  | 70.4  | 48.1  | 34.9 | 14.7 | 10.2 | 5.41 | 2.73 |

#### Constant power discharge ratings-watts at 25°C

| F. V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR  | 3HR  | 5HR  | 10HR | 20HR |
|-----------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V     | 317  | 219   | 171   | 109   | 71.5 | 28.8 | 20.1 | 11.7 | 5.80 |
| 1.67V     | 301  | 216   | 169   | 107   | 69.1 | 28.8 | 20.1 | 11.5 | 5.78 |
| 1.70V     | 281  | 211   | 166   | 104   | 67.3 | 28.8 | 20.1 | 11.4 | 5.78 |
| 1.75V     | 262  | 197   | 156   | 101   | 66.7 | 28.4 | 19.9 | 11.2 | 5.75 |
| 1.80V     | 235  | 183   | 147   | 98.5  | 65.6 | 28.0 | 19.5 | 11.0 | 5.55 |
| 1.85V     | 188  | 152   | 128   | 90.2  | 65.0 | 27.9 | 19.3 | 10.8 | 5.45 |

