

## GEL Plus Batteries

The GEL Plus range of gel technology batteries offers outstanding performance including a 15+ years design life. The GEL Plus batteries is designed based on the LSE series, using the polymer gel electrolyte. Built to the highest standards and compliant with the latest IEC60896- 21/ 22 standard. this range also offers 100% capacity out- of- the- box and is capable of handling deep discharges for complete peace of mind. The use of flexible connectors and the ability to be installed both horizontally and vertically allows for multiple installation possibilities.

## Application

- Correspondence exchange and transmission system
- Mobile communication system
- Power plant and power transformer system
- Radio and broadcasting station
- Navigation and signaling system
- Emergency power system
- UPS
- Other spare, circulatory system

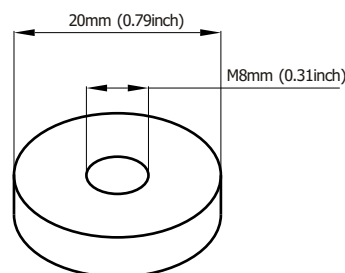
## General Features

- 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.

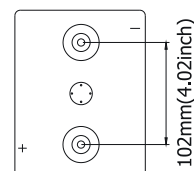
## Construction

Component .....Raw material  
Positive .....Lead dioxide  
Negative .....Lead  
Container .....ABS  
Cover .....ABS

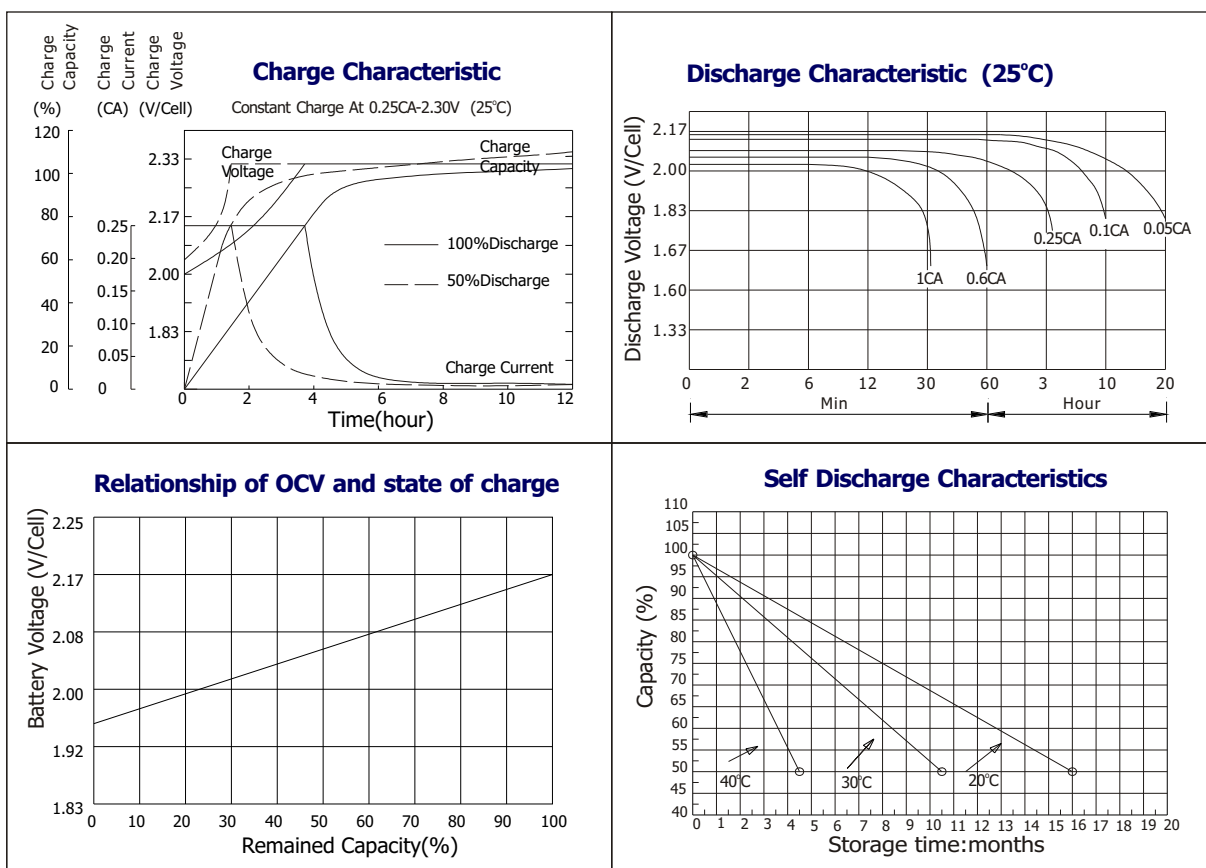
Sealant .....Epoxy Resin  
Safety valve .....EPDR  
Terminal .....Copper  
Separator .....Macromolecule polymer  
Electrolyte .....sulfuric acid thixotropic Gel



**Terminal Dimensions**



| Battery Model                    | GELPlus2-400                                |                    |                        |                  |
|----------------------------------|---------------------------------------------|--------------------|------------------------|------------------|
| Designed Floating Life           | 15 Years                                    |                    |                        |                  |
| Capacity(25°C)                   | 20HR(20.65A,1.75V)                          | 10HR(40A,1.75V)    | 5HR(72A,1.75V)         | 1HR(220A,1.75V)  |
|                                  | 413AH                                       | 400AH              | 360AH                  | 220AH            |
| Dimensions                       | Length                                      | Width              | Height                 | Total Height     |
|                                  | 166mm(6.54inch)                             | 184.5mm(7.261inch) | 360.5mm(14.19inch)     | 372mm(14.65inch) |
| Approx. Weight                   | 26.5Kg (58.43 lbs)                          |                    |                        |                  |
| Internal Resistance              | Full charged at 25°C: 0.00035 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              |                  |
|                                  | 2.3V-2.35V(-5mV/ °C), max. Current: 100A    |                    | 2.25-2.27V(-3.3mV/ °C) |                  |



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

| Time<br>End Voltage | 5min | 15min | 30min | 60min | 2hour | 3hour | 5hour | 6hour | 8hour | 10hour | 24hour |
|---------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 1.60V               | 667  | 558   | 413   | 261   | 154   | 113   | 76.7  | 66.1  | 52.7  | 43.8   | 19.7   |
| 1.65V               | 616  | 521   | 396   | 248   | 151   | 110   | 74.8  | 65.3  | 52.0  | 43.3   | 19.6   |
| 1.70V               | 576  | 488   | 364   | 237   | 145   | 107   | 74.1  | 64.4  | 51.1  | 42.7   | 19.6   |
| 1.75V               | 549  | 462   | 339   | 226   | 140   | 104   | 72.1  | 63.4  | 50.5  | 42.1   | 19.3   |
| 1.80V               | 528  | 436   | 317   | 212   | 134   | 101   | 70.4  | 61.8  | 49.5  | 41.1   | 19.0   |
| 1.83V               | 491  | 409   | 302   | 198   | 128   | 97.3  | 68.7  | 60.7  | 48.6  | 40.2   | 18.6   |
| 1.85V               | 467  | 386   | 283   | 191   | 121   | 95.4  | 68.0  | 59.8  | 48.1  | 40.0   | 18.4   |
| 1.88V               | 434  | 352   | 265   | 183   | 118   | 93.5  | 67.3  | 58.9  | 47.5  | 39.7   | 18.2   |
| 1.90V               | 402  | 327   | 242   | 170   | 113   | 89.5  | 65.5  | 57.6  | 46.3  | 38.6   | 18.0   |
| 1.94V               | 361  | 291   | 215   | 151   | 102   | 82.3  | 60.7  | 53.5  | 43.2  | 36.4   | 17.4   |

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

| Time<br>End Voltage | 5min | 15min | 30min | 60min | 2hour | 3hour | 5hour | 6hour | 8hour | 10hour | 24hour |
|---------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 1.60V               | 1133 | 949   | 756   | 539   | 348   | 257   | 170   | 145   | 114   | 92.7   | 41.8   |
| 1.65V               | 1078 | 911   | 715   | 498   | 319   | 242   | 164   | 141   | 109   | 90.4   | 41.0   |
| 1.70V               | 1036 | 879   | 697   | 474   | 310   | 233   | 160   | 138   | 107   | 87.8   | 40.2   |
| 1.75V               | 1004 | 846   | 673   | 455   | 299   | 224   | 156   | 135   | 103   | 86.5   | 39.8   |
| 1.80V               | 976  | 806   | 649   | 445   | 293   | 217   | 152   | 131   | 110   | 85.1   | 39.2   |
| 1.83V               | 923  | 769   | 613   | 429   | 281   | 211   | 149   | 127   | 98.3  | 83.5   | 38.6   |
| 1.85V               | 888  | 734   | 578   | 405   | 269   | 205   | 145   | 124   | 97.0  | 81.8   | 37.6   |
| 1.88V               | 838  | 680   | 537   | 380   | 250   | 198   | 140   | 119   | 94.4  | 79.9   | 36.6   |
| 1.90V               | 783  | 637   | 487   | 349   | 234   | 190   | 135   | 116   | 90.8  | 75.9   | 35.2   |
| 1.94V               | 708  | 570   | 436   | 309   | 216   | 177   | 128   | 111   | 87.1  | 72.6   | 34.8   |