



# LPGS Series-Gel Battery

## LPGS2-500(2V500Ah)

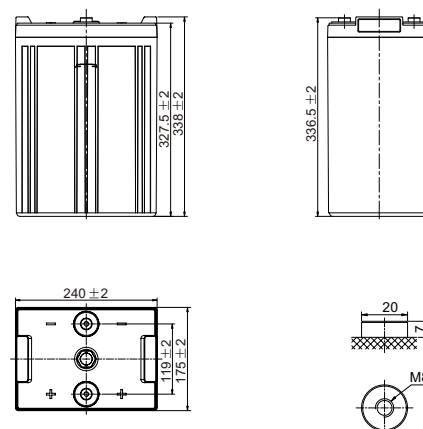


### Specifications

|                               |                                                                                                                                                                           |                                |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Rated Voltage                 | 2V                                                                                                                                                                        |                                |
| Nominal Capacity              | 500.0Ah                                                                                                                                                                   | (C <sub>10</sub> , 1.80V/cell) |
| Dimension                     | Length                                                                                                                                                                    | 240±2mm (9.45 inches)          |
|                               | Width                                                                                                                                                                     | 175±2mm (6.89 inches)          |
|                               | Container Height                                                                                                                                                          | 330±2mm (13.0 inches)          |
|                               | Total Height                                                                                                                                                              | 350±2mm (13.8 inches)          |
| Approx Weight                 | 30.2 Kg (66.6 lbs)                                                                                                                                                        |                                |
| Terminal                      | M8                                                                                                                                                                        |                                |
| Container Material            | ABS                                                                                                                                                                       |                                |
| Rated Capacity (25°C)         | 518.0 Ah                                                                                                                                                                  | (20hr, 25.9A, 1.80V/cell)      |
|                               | 500.0 Ah                                                                                                                                                                  | (10hr, 50.0A, 1.80V/cell)      |
|                               | 429.0 Ah                                                                                                                                                                  | (5hr, 85.8A, 1.75V/cell)       |
|                               | 378.0 Ah                                                                                                                                                                  | (3hr, 126.0A, 1.75V/cell)      |
|                               | 260.3 Ah                                                                                                                                                                  | (1hr, 260.3A, 1.67V/cell)      |
| Max. Discharge Current        | 4000A (5s)                                                                                                                                                                |                                |
| Internal Resistance (25°C)    | Approx 0.60mΩ                                                                                                                                                             |                                |
| Operating Temp. Range         | Discharge : -20 ~ 55°C (-4 ~ 131°F)                                                                                                                                       |                                |
|                               | Charge : -20 ~ 40°C (-4 ~ 104°F)                                                                                                                                          |                                |
|                               | Storage : -20 ~ 50°C (-4 ~ 122°F)                                                                                                                                         |                                |
| Nominal Operating Temp. Range | 25±3°C (77±5°F)                                                                                                                                                           |                                |
| Cycle Use                     | Initial Charging Current less than 125.0A. Voltage                                                                                                                        |                                |
|                               | 2.35V~2.40V at 25°C(77°F)Temp. Coefficient -5mV/°C                                                                                                                        |                                |
| Standby Use                   | Initial Charging Current less than 125.0A. Voltage                                                                                                                        |                                |
|                               | 2.25V~2.30V at 25°C(77°F)Temp. Coefficient -3mV/°C                                                                                                                        |                                |
| Effect of temp. to Capacity   | 40°C (104°F)                                                                                                                                                              | 103%                           |
|                               | 25°C (77°F)                                                                                                                                                               | 100%                           |
|                               | 0°C (32°F)                                                                                                                                                                | 86%                            |
| Self Discharge                | LPGS series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. |                                |



### Layout



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

| F.V/Time   | 10min | 15min | 20min | 30min | 45min | 1h    | 2h    | 3h    | 4h    | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1.85V/cell | 567.0 | 500.0 | 450.0 | 372.2 | 295.2 | 238.6 | 148.5 | 119.3 | 94.3  | 81.0 | 69.4 | 55.9 | 47.7 | 25.3 |
| 1.80V/cell | 670.4 | 568.0 | 501.0 | 399.5 | 310.5 | 250.3 | 156.6 | 125.5 | 98.5  | 85.1 | 72.5 | 58.1 | 50.0 | 25.9 |
| 1.75V/cell | 756.0 | 624.0 | 540.0 | 423.0 | 326.5 | 252.1 | 163.1 | 126.0 | 101.8 | 85.8 | 74.3 | 59.2 | 50.4 | 26.3 |
| 1.70V/cell | 811.6 | 666.0 | 577.6 | 443.9 | 337.1 | 253.5 | 167.9 | 127.3 | 104.0 | 86.3 | 75.5 | 60.1 | 50.8 | 26.6 |
| 1.67V/cell | 841.7 | 684.1 | 577.6 | 454.7 | 346.3 | 260.3 | 170.4 | 128.2 | 105.1 | 86.9 | 76.2 | 60.5 | 51.1 | 26.7 |
| 1.60V/cell | 906.2 | 723.1 | 617.5 | 473.7 | 358.5 | 270.1 | 175.1 | 129.5 | 107.0 | 88.3 | 77.3 | 61.3 | 51.9 | 27.0 |

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

| F.V/Time   | 10min  | 15min  | 20min  | 30min | 45min | 1h    | 2h    | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h  |
|------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1.85V/cell | 1066.0 | 946.0  | 855.3  | 711.6 | 567.7 | 460.8 | 288.3 | 232.3 | 184.4 | 159.3 | 136.8 | 110.7 | 94.6  | 50.3 |
| 1.80V/cell | 1240.2 | 1059.5 | 941.0  | 756.9 | 592.5 | 480.7 | 302.7 | 242.7 | 191.9 | 166.4 | 142.3 | 114.6 | 99.0  | 51.3 |
| 1.75V/cell | 1376.7 | 1147.6 | 1002.7 | 794.0 | 618.4 | 482.4 | 314.1 | 244.1 | 197.8 | 167.0 | 145.3 | 116.5 | 99.7  | 52.1 |
| 1.70V/cell | 1455.3 | 1210.9 | 1062.0 | 826.7 | 635.1 | 483.4 | 321.9 | 244.9 | 201.4 | 167.7 | 147.6 | 118.2 | 100.3 | 52.6 |
| 1.67V/cell | 1493.7 | 1232.1 | 1053.2 | 839.7 | 648.4 | 493.6 | 325.6 | 245.6 | 203.1 | 168.3 | 148.5 | 118.8 | 100.8 | 52.8 |
| 1.60V/cell | 1569.3 | 1276.6 | 1110.3 | 866.0 | 665.4 | 507.8 | 332.2 | 248.1 | 205.8 | 170.3 | 150.3 | 120.1 | 102.3 | 53.3 |



# LPGS Series-Gel Battery

## LPGS2-500(2V500Ah)



### Applications

- Telecommunications
- Uninterruptable Power System
- Power system communication, military communication, etc.
- Network communication including: data transmission, television signal transmission, etc.

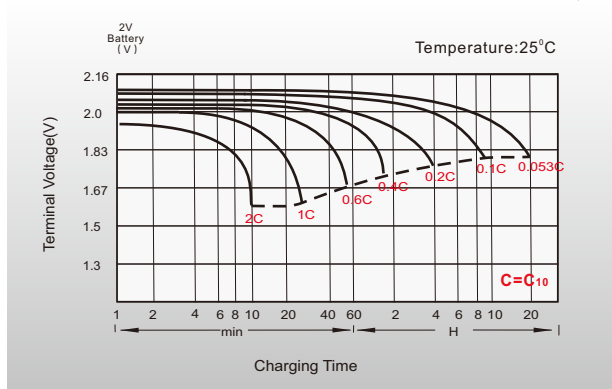
### General Features

- Adopted advantage AGM-GEL technology
- Operation temperature -20 55°C
- $\leq 3\%$  Self discharge @25°C

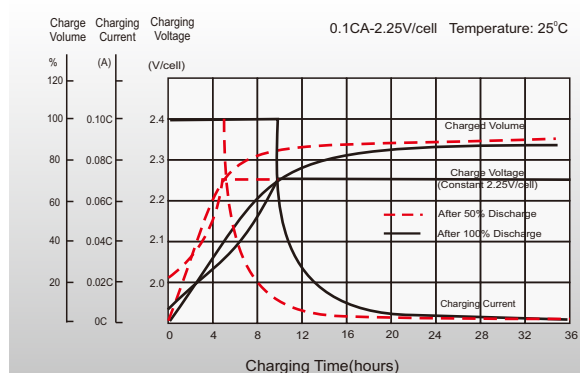
### Standards

- IEC 60896 Certified
- Classified as "Very Long Life" according to Eurobat
- UL Certified, CE Certified
- Manufactured in Leoch® IATF16949, ISO 9001, ISO 14001 and ISO 45001 certified production facilities

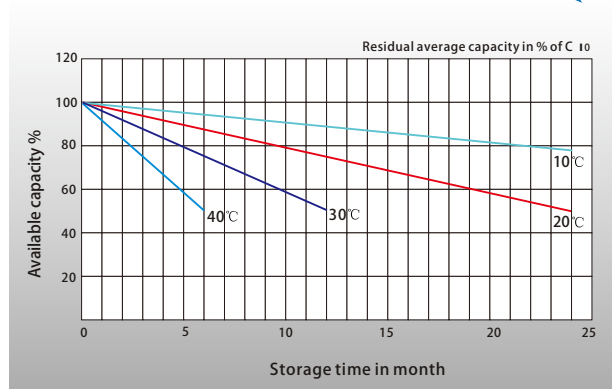
### Discharge Characteristics



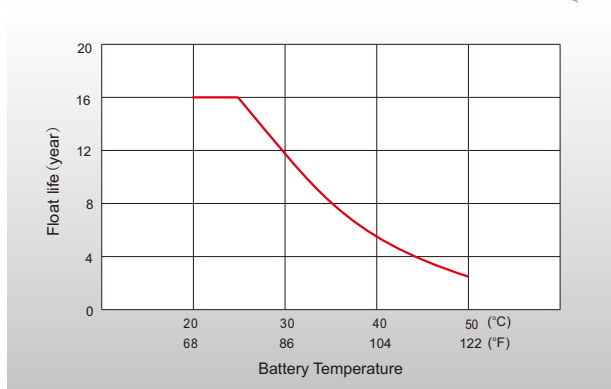
### Float Charging Characteristics



### General Relation of Capacity VS. Storage Time



### Effect of Temperature on Long Term Float Life



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