



# LP12-2.3 (12V 2.3Ah)

| Specifications                |  |
|-------------------------------|--|
| Rated Voltage                 | 12   |
| Nominal Capacity (20Hr)       | 2.3Ah  |
| Dimensions                    | Length 178 mm  |
|                               | Width 35 mm  |
|                               | Container Height 60 mm   |
|                               | Total Height 66 mm   |
| Approx. Weight                | 0.97 Kg (2.14lbs)  |
| Terminal                      | T1   |
| Layout                        | 1  |
| Container material            | ABS  |
| Rated Capacity (25°C)         | 2.30 Ah (20hr,0.115A,1.80V/cell)   |
|                               | 2.14 Ah (10hr,0.214A,1.80V/cell)   |
|                               | 1.93 Ah (5hr,0.386A,1.75V/cell)  |
|                               | 1.69 Ah (3hr,0.563A,1.75V/cell)  |
|                               | 1.40 Ah (1hr,1.40A,1.60V/cell)   |
| Max. Discharge Current        | 34.5A (5s)   |
| Internal Resistance (25°C)    | Approx 90mΩ  |
| Operating Temp. Range         | Discharge: -15°C ~50°C (5~122°F)   |
|                               | Charge: 0°C ~40°C (32~104°F)   |
|                               | Storage: -15°C ~40°C (5~104°F)   |
| Nominal Operating Temp. Range | 25±3°C (77±5°F)  |
| Cycle Use                     | Initial Charging Current less than 0.69A. Voltage 14.4V~15.0V at 25°C (77 °F)Temp. Coefficient -30mV/°C  |
| Standby Use                   | No Limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C (77 °F)Temp. Coefficient -20mV/°C   |
| Effect Of Temp. To Capacity   | 40°C (104°F) 103%  |
|                               | 25°C (77°F) 100%   |
|                               | 0°C (32°F) 86%   |
| Self Discharge                | LP 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. |



## Description and Features

The LP Series AGM batteries have been specially developed to be widely applicable. These lead acid batteries with AGM technology are completely sealed and therefore 100% maintenance free and leak-proof. These batteries have a low self-discharge. The reliable and safe multipurpose batteries from the LP Series offer a long service life and can be used in various industries.

### Features

- Absorbent Glass Mat technology
- Reliable and safe performance
- Long service life - 3-5 years in standby application (at 25°C)
- Suitable for multipurpose applications

| Layout | Terminal | UL certification |
|--------|----------|------------------|
|        |          |                  |

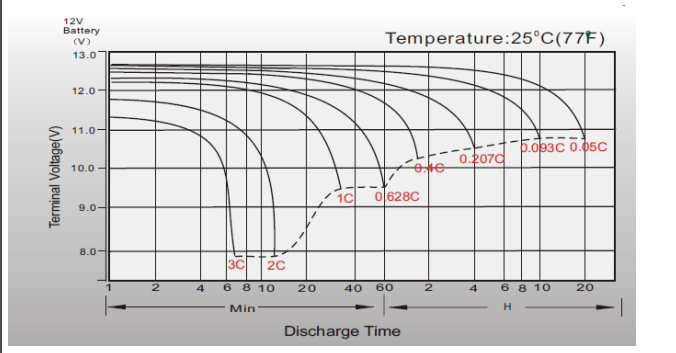
| Constant Current Discharge Characteristics: A (25°C) |       |        |        |        |        |        |      |       |       |       |       |       |       |       |       |
|--|-------|--------|--------|--------|--------|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| F.V/Time   | 5 Min | 10 Min | 15 Min | 20 Min | 30 Min | 45 Min | 1Hr  | 2 Hr  | 3 Hr  | 4 Hr  | 5 Hr  | 6 Hr  | 8 Hr  | 10 Hr | 20 Hr |
| 1.85V/cell   | 4.42  | 3.08   | 2.54   | 2.20   | 1.77   | 1.36   | 1.11 | 0.679 | 0.517 | 0.425 | 0.361 | 0.312 | 0.248 | 0.207 | 0.114 |
| 1.80V/cell   | 5.43  | 3.67   | 2.94   | 2.49   | 1.96   | 1.48   | 1.20 | 0.721 | 0.544 | 0.447 | 0.376 | 0.326 | 0.258 | 0.214 | 0.115 |
| 1.75V/cell   | 6.43  | 4.15   | 3.25   | 2.71   | 2.09   | 1.57   | 1.26 | 0.752 | 0.563 | 0.461 | 0.386 | 0.334 | 0.265 | 0.218 | 0.116 |
| 1.70V/cell   | 7.30  | 4.58   | 3.51   | 2.91   | 2.19   | 1.63   | 1.31 | 0.783 | 0.581 | 0.472 | 0.396 | 0.342 | 0.269 | 0.222 | 0.118 |
| 1.67V/cell   | 8.05  | 4.93   | 3.72   | 3.06   | 2.29   | 1.70   | 1.37 | 0.806 | 0.596 | 0.482 | 0.405 | 0.349 | 0.273 | 0.225 | 0.120 |
| 1.60V/cell   | 8.45  | 5.13   | 3.87   | 3.15   | 2.35   | 1.74   | 1.40 | 0.831 | 0.610 | 0.494 | 0.413 | 0.356 | 0.279 | 0.229 | 0.121 |

| Constant Power Discharge Characteristics: Wpc (25°C) |       |        |        |        |        |        |      |      |      |       |       |       |       |       |       |
|--|-------|--------|--------|--------|--------|--------|------|------|------|-------|-------|-------|-------|-------|-------|
| F.V/Time   | 5 Min | 10 Min | 15 Min | 20 Min | 30 Min | 45 Min | 1Hr  | 2 Hr | 3 Hr | 4 Hr  | 5 Hr  | 6 Hr  | 8 Hr  | 10 Hr | 20 Hr |
| 1.85V/cell   | 8.33  | 5.86   | 4.88   | 4.27   | 3.45   | 2.66   | 2.19 | 1.34 | 1.03 | 0.848 | 0.722 | 0.627 | 0.500 | 0.416 | 0.230 |
| 1.80V/cell   | 10.1  | 6.93   | 5.61   | 4.79   | 3.79   | 2.89   | 2.34 | 1.42 | 1.07 | 0.886 | 0.748 | 0.650 | 0.515 | 0.428 | 0.231 |
| 1.75V/cell   | 11.8  | 7.76   | 6.13   | 5.17   | 4.02   | 3.05   | 2.45 | 1.47 | 1.11 | 0.908 | 0.764 | 0.662 | 0.526 | 0.434 | 0.232 |
| 1.70V/cell   | 13.3  | 8.46   | 6.58   | 5.51   | 4.19   | 3.15   | 2.54 | 1.52 | 1.14 | 0.925 | 0.778 | 0.674 | 0.530 | 0.439 | 0.235 |
| 1.67V/cell   | 14.5  | 8.99   | 6.87   | 5.73   | 4.33   | 3.25   | 2.63 | 1.56 | 1.16 | 0.940 | 0.792 | 0.684 | 0.536 | 0.443 | 0.237 |
| 1.60V/cell   | 14.9  | 9.24   | 7.08   | 5.84   | 4.41   | 3.29   | 2.67 | 1.60 | 1.18 | 0.957 | 0.803 | 0.694 | 0.545 | 0.448 | 0.237 |

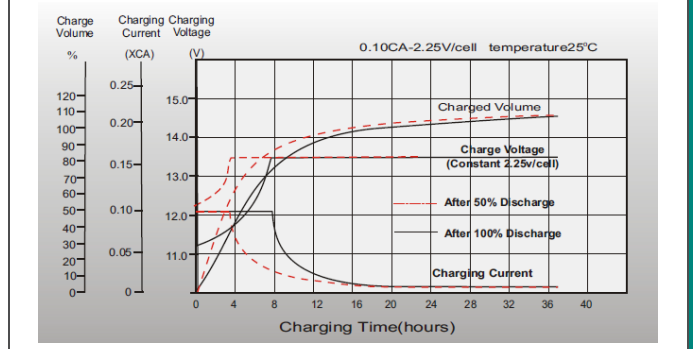


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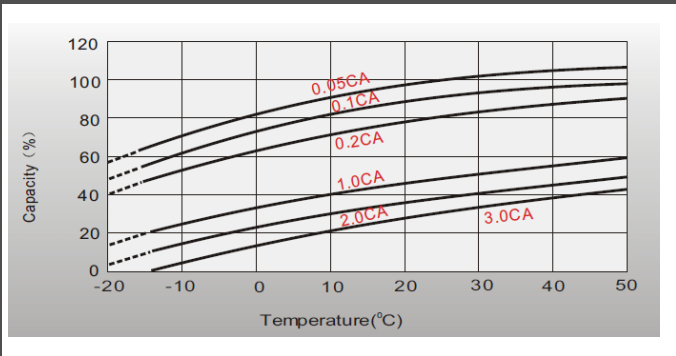
## Discharge Characteristics



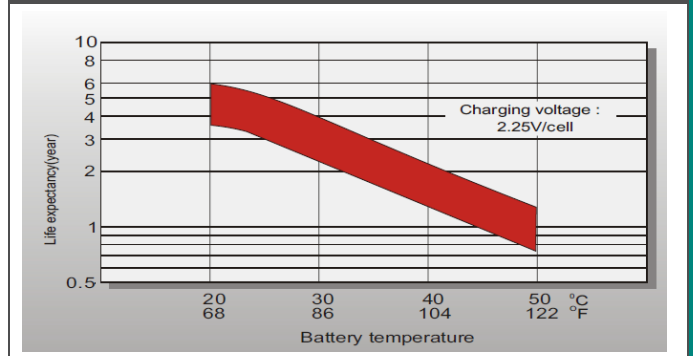
## Float Charging Characteristics



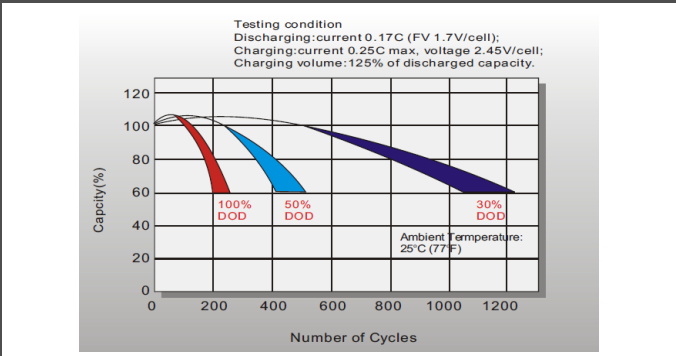
## Temperature Effects In Relation To Battery Capacity



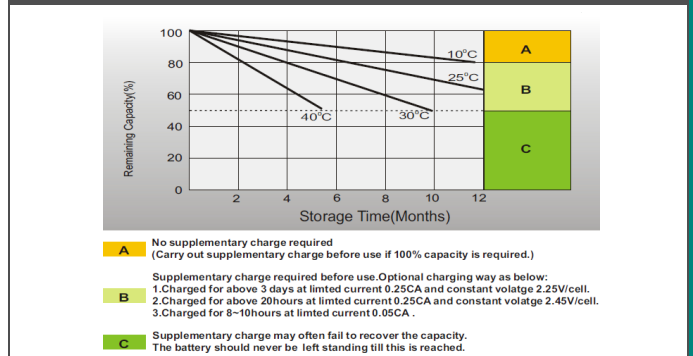
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



## Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Aircraft signal
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply
- DC power supply
- Auto control system

(Note) All above information shall be changed without prior notice, Landport Batteries reserves the right to explain and update the latest information.