

USL2-100(2V100AH)

Application

- Data Center
- Telecommunication center room
- 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

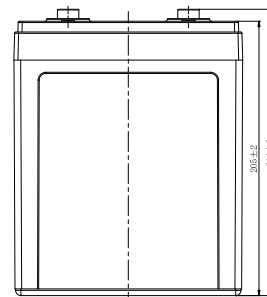
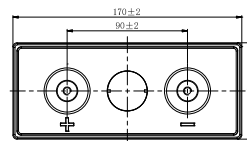


Features

- General purpose: 9~14 years design life
- VRLA Battery, maintenance-free
- Low self-discharge rate
- Silver-coated copper terminals
- PbCaSn alloy for plate grids: less gassing, less self-discharge
- ABS container, Flame retardant UL94-V0

Layout

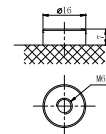
Unit: mm



Terminal

M8 Terminal

Unit: mm [inches]

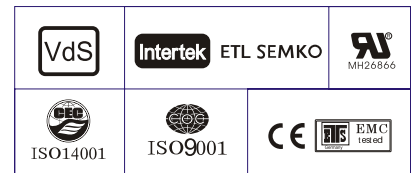


Long Life Standby AGM Battery - USL Series

USL2-100(2V100AH)

Specification

| | | |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Nominal Voltage | 12V | |
| Rated Capacity (Ah) | 105.0 AH/5.25A | (20hr, 1.80V/cell, 25°C/77°F) |
| | 100.0 AH/10.0A | (10hr, 1.80V/cell, 25°C/77°F) |
| | 88.0 AH/17.6A | (5hr, 1.75V/cell, 25°C/77°F) |
| | 76.2 AH/25.4A | (3hr, 1.75V/cell, 25°C/77°F) |
| | 64.0 AH/64.0A | (1hr, 1.60V/cell, 25°C/77°F) |
| Dimension | Length | 170±2mm (6.69 inches) |
| | Width | 72±2mm (2.83 inches) |
| | Container Height | 205±2mm (8.07 inches) |
| | Total Height (with Terminal) | 214±2mm (8.43 inches) |
| Approx Weight | Approx 5.80 kg (12.8 lbs) | |
| Terminal | M8 | |
| Container Material | ABS | |
| Max. Discharge Current | 800A (5s) | |
| Internal Resistance | Approx 1.0mΩ | |
| Operating Temp. Range | Discharge : -15 ~ 50°C | |
| | Charge : 0 ~ 40°C | |
| | Storage : -15 ~ 40°C | |
| Capacity affected by Temperature | 40°C | 106% |
| | 25°C | 100% |
| | 0°C | 86% |
| Self Discharge | USL 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. | |



Performance - 25 °C

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

| F.V/Time | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 81.7 | 61.3 | 52.0 | 29.6 | 23.6 | 19.2 | 16.4 | 14.8 | 11.6 | 9.30 | 4.88 |
| 1.80V/cell | 91.0 | 65.0 | 55.1 | 31.2 | 25.0 | 20.1 | 17.0 | 15.3 | 11.9 | 10.0 | 5.25 |
| 1.75V/cell | 95.0 | 67.3 | 58.4 | 32.6 | 25.4 | 20.9 | 17.6 | 15.8 | 12.1 | 10.1 | 5.30 |
| 1.70V/cell | 96.2 | 68.7 | 61.1 | 33.9 | 26.2 | 21.4 | 17.9 | 16.0 | 12.3 | 10.2 | 5.35 |
| 1.65V/cell | 97.7 | 69.7 | 63.3 | 34.9 | 27.0 | 21.9 | 18.2 | 16.3 | 12.5 | 10.3 | 5.41 |
| 1.60V/cell | 99.2 | 70.7 | 64.0 | 35.5 | 27.5 | 22.2 | 18.5 | 16.5 | 12.6 | 10.4 | 5.46 |

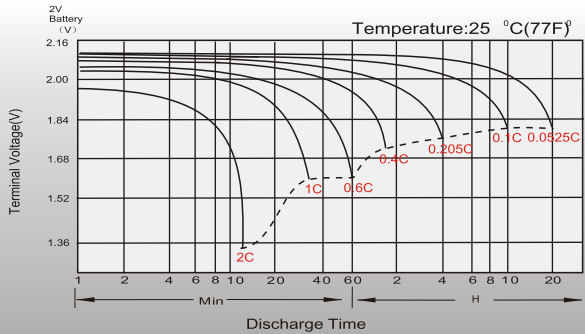
Constant Power Discharge (Watts) at 25 °C (77°F)

| F.V/Time | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 149.8 | 117.9 | 83.5 | 52.4 | 40.0 | 32.9 | 30.1 | 26.7 | 19.8 | 16.6 | 8.70 |
| 1.80V/cell | 166.9 | 124.1 | 89.8 | 56.6 | 42.8 | 34.8 | 31.8 | 28.0 | 20.5 | 16.9 | 8.85 |
| 1.75V/cell | 174.2 | 127.9 | 94.5 | 58.7 | 44.2 | 35.9 | 32.9 | 28.8 | 20.7 | 17.1 | 8.95 |
| 1.70V/cell | 176.4 | 129.5 | 98.7 | 60.3 | 45.4 | 36.9 | 33.5 | 29.3 | 20.9 | 17.2 | 9.05 |
| 1.65V/cell | 179.1 | 130.7 | 103.0 | 62.0 | 46.7 | 37.8 | 33.9 | 29.7 | 21.1 | 17.4 | 9.15 |
| 1.60V/cell | 181.8 | 131.3 | 107.2 | 63.3 | 47.7 | 38.3 | 34.4 | 30.1 | 21.5 | 17.7 | 9.30 |

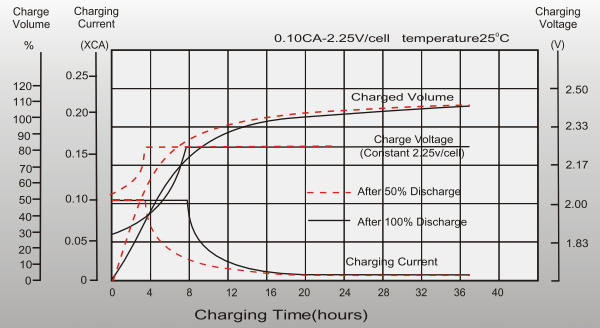
Long Life Standby AGM Battery - USL Series

Characteristic Curve

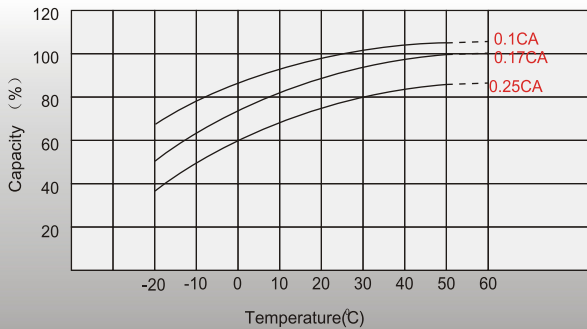
Discharge Characteristics



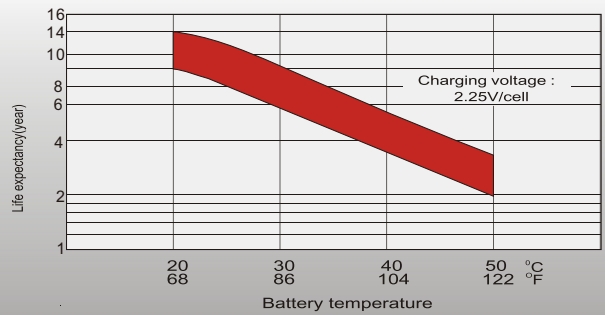
Float Charging Characteristics



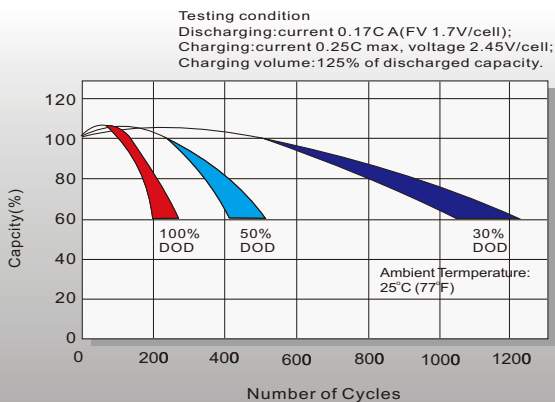
Temperature Effects in Relation to Battery Capacity



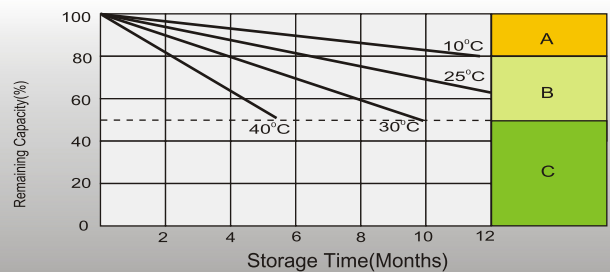
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



A No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

B Supplementary charge required before use. Optional charging way as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8-10 hours at limited current 0.05CA.

C Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.