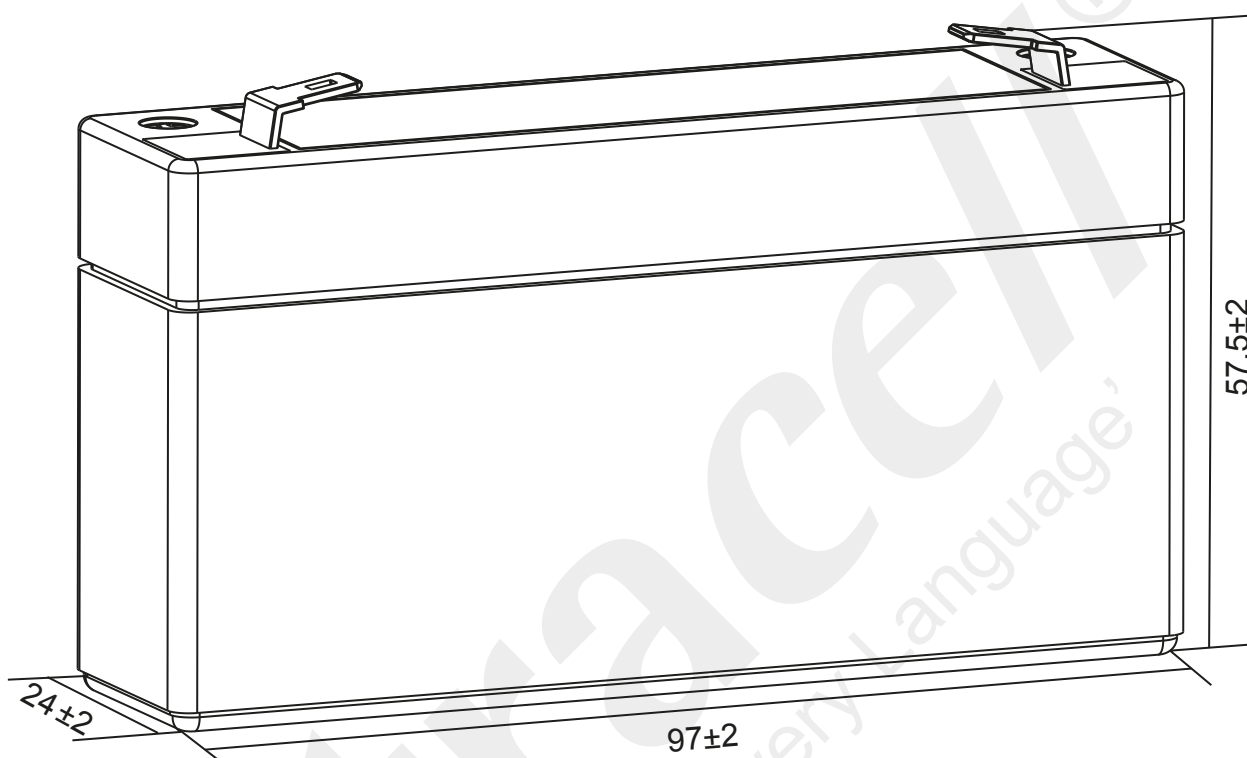
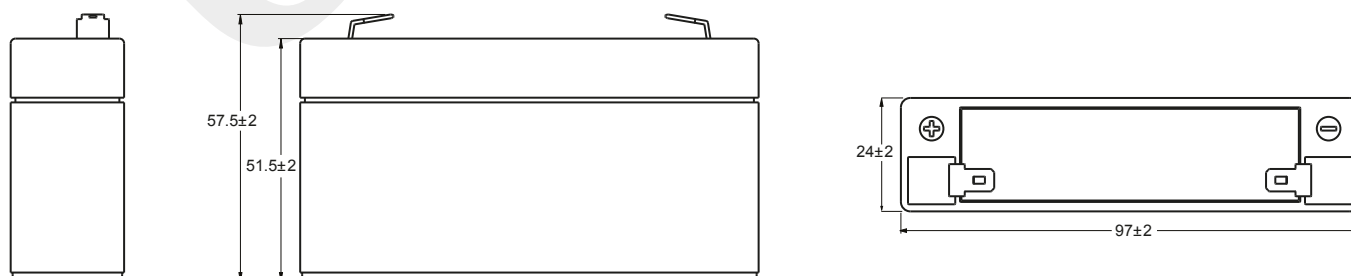




## Technical Dimensions (mm)



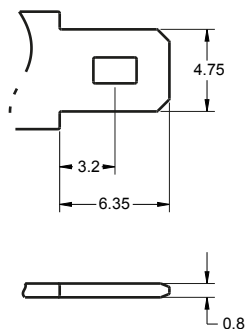


## Image



## Terminal Dimensions (mm)

### Standard Terminal: F1



## Technical Specification

|                              |                                  |                                                                                                    |
|------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------|
| Output                       | Nominal Voltage                  | 6V                                                                                                 |
|                              | Nominal Capacity (20HR)          | 1.3Ah                                                                                              |
| Terminal Type                | Standard Terminal                | F1                                                                                                 |
| Container Material           | Standard Option                  | ABS                                                                                                |
|                              | Flame Retardant Option (FR)      | ABS (UL94:VO)                                                                                      |
| Rated Capacity               | (20HR 1.80V/cell, 25°C)          | 1.30 Ah/0.065A                                                                                     |
|                              | (10HR 1.80V/cell, 25°C)          | 1.12 Ah/0.112A                                                                                     |
|                              | (5HR 1.75V/cell, 25°C)           | 1.01 Ah/0.202A                                                                                     |
|                              | (3HR 1.75V/cell, 25°C)           | 0.882 Ah/0.294A                                                                                    |
|                              | (1HR 1.60V/cell, 25°C)           | 0.728 Ah/0.728A                                                                                    |
|                              |                                  |                                                                                                    |
| Max Discharge Current        | 18A (5s)                         |                                                                                                    |
| Internal Resistance          | Approx 65mΩ                      |                                                                                                    |
| Discharge Characteristics    | Operating Temp Range             | Discharge: -15 ~ 50°C<br>Charge: 0 ~ 40°C<br>Storage: -15 ~ 40°C                                   |
|                              | Nominal Operating Temp Range     | 25 ± 3°C                                                                                           |
|                              | Cycle Use                        | Initial Charging Current less than 0.36A.<br>Voltage 7.2V ~ 7.5V @ 25°C Temp. Coefficient -15mV/°C |
|                              | Standby Use                      | No limit on initial charging current.<br>Voltage 6.75V ~ 6.9V @ 25°C Temp. Coefficient -10mV/°C    |
|                              | Capacity affected by Temperature | 40°C 103%<br>25°C 100%<br>0°C 86%                                                                  |
|                              |                                  |                                                                                                    |
| Design Floating Life at 20°C | 5 Years                          |                                                                                                    |

## Self Discharge

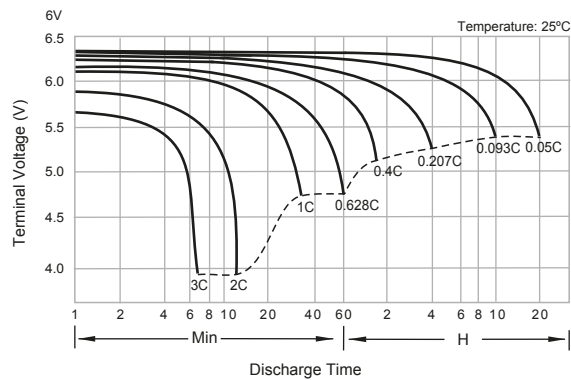
Ultracell® UL batteries may be stored for up to 6 months at 25°C and then a refresh charge is required. For higher temperatures the time intervals will be shorter.

## Constant Current Discharge / Constant Power Discharge At 25°C (Amperes & Watts/Cell)

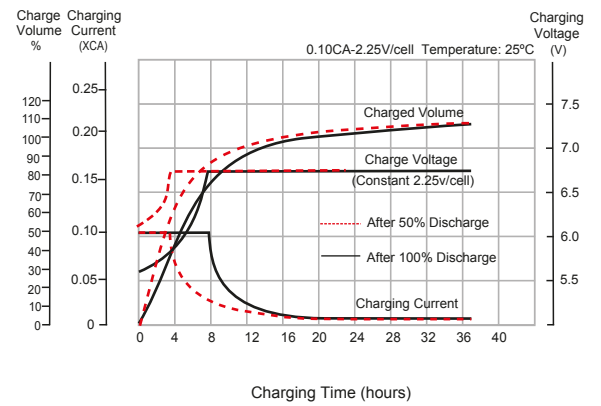
A = Amperes W = Watts

| F.V/TIME   | 5    | 10   | 15   | 20   | 30    | 45    | 60    | 2     | 3     | 4     | 5     | 6     | 8     | 10    | 20    |
|------------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A W        | min  | min  | min  | min  | min   | min   | min   | hours | hours | hours | hours | hours | hours | hours | hours |
| 1.85V/cell | 2.30 | 1.61 | 1.32 | 1.15 | 0.922 | 0.709 | 0.580 | 0.354 | 0.270 | 0.222 | 0.188 | 0.163 | 0.130 | 0.108 | 0.059 |
|            | 4.35 | 3.06 | 2.55 | 2.23 | 1.80  | 1.39  | 1.14  | 0.701 | 0.536 | 0.442 | 0.377 | 0.327 | 0.261 | 0.217 | 0.120 |
| 1.80V/cell | 2.83 | 1.92 | 1.54 | 1.30 | 1.02  | 0.773 | 0.624 | 0.376 | 0.284 | 0.233 | 0.196 | 0.170 | 0.134 | 0.112 | 0.065 |
|            | 5.28 | 3.61 | 2.93 | 2.50 | 1.98  | 1.51  | 1.22  | 0.741 | 0.560 | 0.462 | 0.390 | 0.339 | 0.269 | 0.224 | 0.121 |
| 1.75V/cell | 3.36 | 2.17 | 1.69 | 1.41 | 1.09  | 0.821 | 0.656 | 0.392 | 0.294 | 0.240 | 0.202 | 0.174 | 0.138 | 0.114 | 0.066 |
|            | 6.18 | 4.05 | 3.20 | 2.70 | 2.10  | 1.59  | 1.28  | 0.768 | 0.577 | 0.474 | 0.399 | 0.345 | 0.274 | 0.226 | 0.121 |
| 1.70V/cell | 3.81 | 2.39 | 1.83 | 1.52 | 1.14  | 0.853 | 0.684 | 0.409 | 0.303 | 0.246 | 0.207 | 0.179 | 0.140 | 0.116 | 0.067 |
|            | 6.93 | 4.42 | 3.43 | 2.88 | 2.19  | 1.64  | 1.33  | 0.796 | 0.592 | 0.483 | 0.406 | 0.352 | 0.277 | 0.229 | 0.122 |
| 1.65V/cell | 4.20 | 2.57 | 1.94 | 1.59 | 1.19  | 0.886 | 0.713 | 0.421 | 0.311 | 0.251 | 0.211 | 0.182 | 0.142 | 0.117 | 0.068 |
|            | 7.54 | 4.69 | 3.59 | 2.99 | 2.26  | 1.70  | 1.37  | 0.814 | 0.604 | 0.490 | 0.413 | 0.357 | 0.280 | 0.231 | 0.124 |
| 1.60V/cell | 4.41 | 2.68 | 2.02 | 1.65 | 1.23  | 0.906 | 0.728 | 0.434 | 0.318 | 0.258 | 0.216 | 0.186 | 0.145 | 0.119 | 0.068 |
|            | 7.79 | 4.82 | 3.70 | 3.05 | 2.30  | 1.72  | 1.39  | 0.834 | 0.615 | 0.499 | 0.419 | 0.362 | 0.284 | 0.234 | 0.124 |

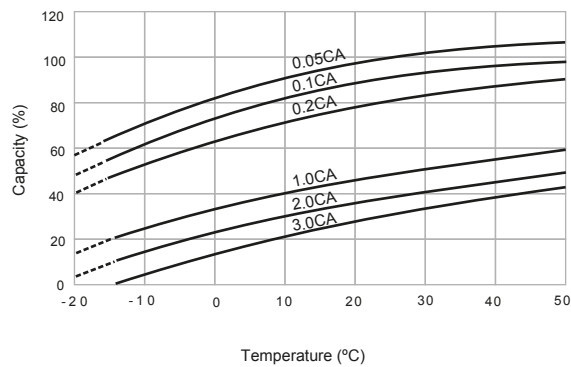
## Discharge Characteristics



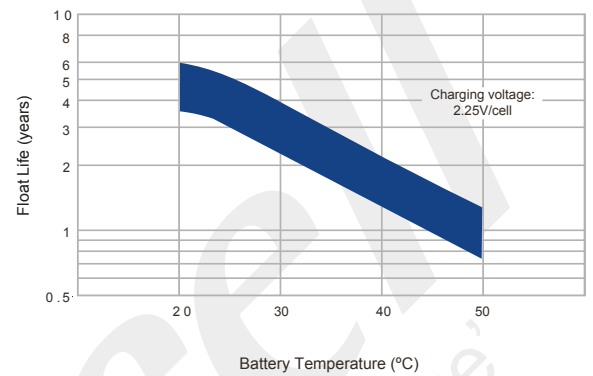
## Float Charging Characteristics



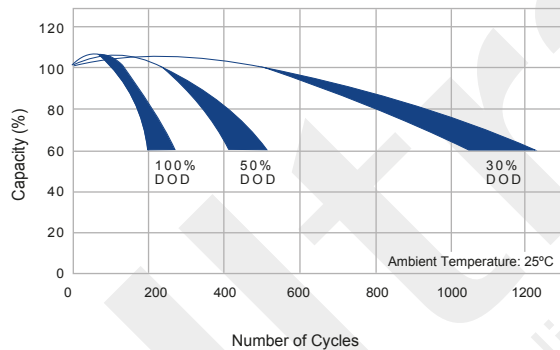
## Temperature Effects in Relation to Battery Capacity



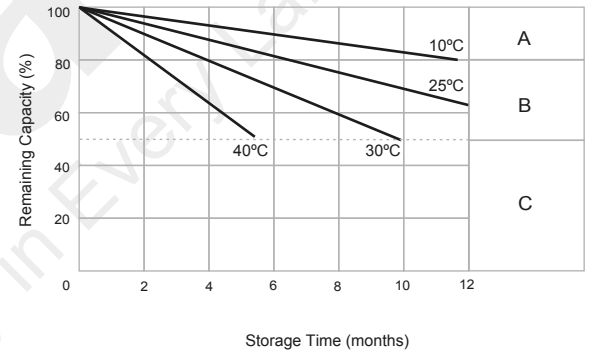
## Effects of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## General Relation of Capacity vs. Storage Time



## General Relation of Capacity vs. Storage Time (Notes)

- A) No supplementary charge required.  
(Carryout 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 2.25V/cell.
  3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C) Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.