

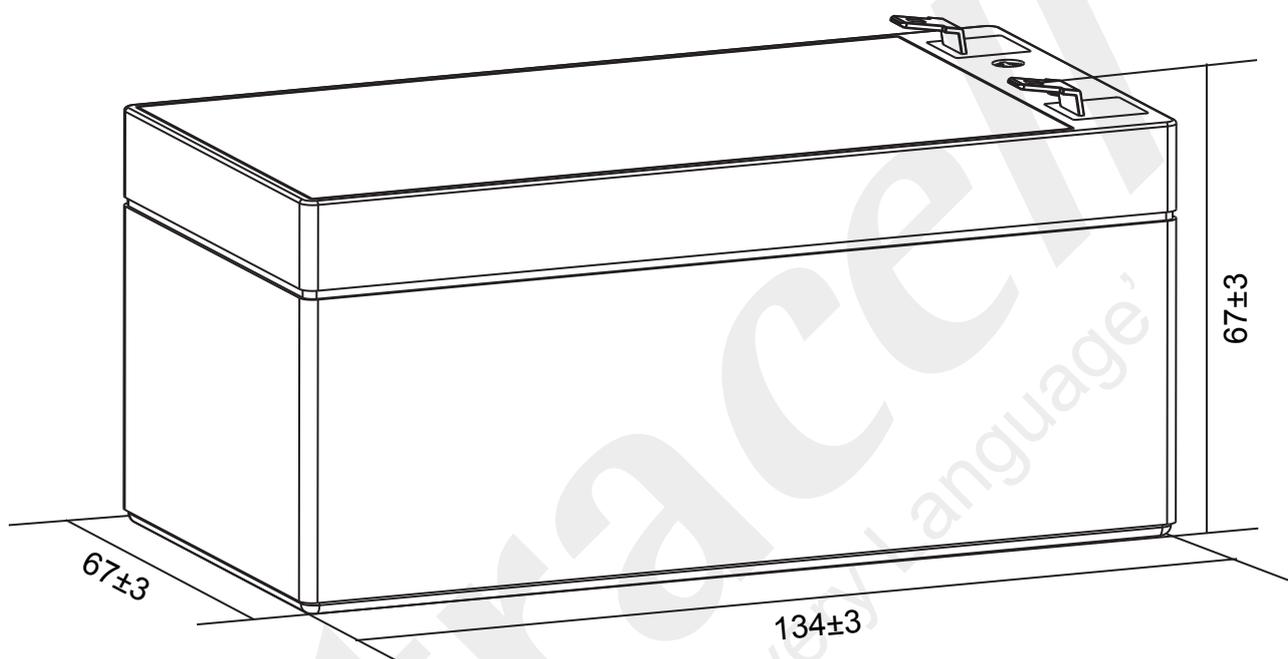
# Ultracell®

'Quality in Every Language'

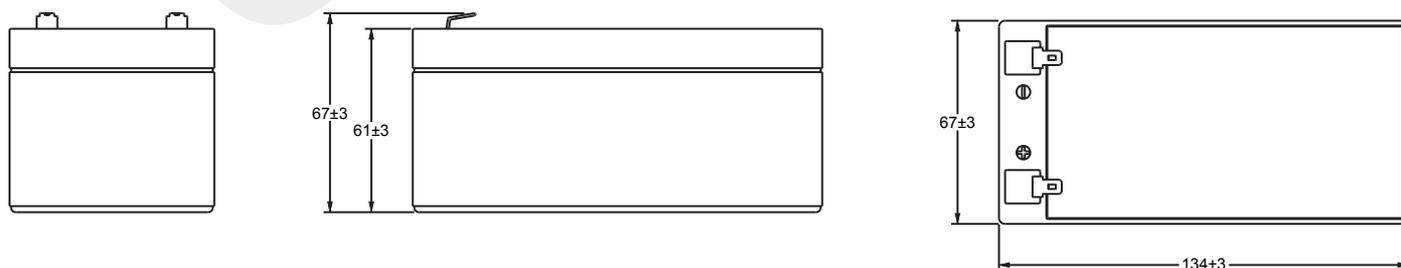
UL3.4-12

12V 3.4Ah

General Series



## Technical Dimensions (mm)

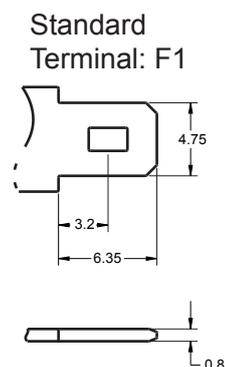




Image



Terminal Dimensions (mm)



Technical Specification

<b>Output</b>	Nominal Voltage	12V
	Nominal Capacity (20HR)	3.4Ah
<b>Terminal Type</b>	Standard Terminal	F1
<b>Container Material</b>	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
<b>Rated Capacity</b>	(20HR 1.75V/cell, 25°C)	3.40 Ah/0.17A
	(10HR 1.75V/cell, 25°C)	3.10 Ah/0.31A
	(1HR 1.60V/cell, 25°C)	2.15 Ah/2.15A
<b>Max Discharge Current</b>	51A (5s)	
<b>Internal Resistance</b>	Approx 50mΩ	
<b>Discharge Characteristics</b>	Operating Temp Range	Discharge: -15 ~ 50°C Charge: -10 ~ 50°C Storage: -20 ~ 50°C
	Nominal Operating Temp Range	25 ± 3°C
	Cycle Use	Initial Charging Current less than 1.02A. Voltage 14.5V ~ 14.9V @ 25°C Temp. Coefficient -30mV/°C
	Standby Use	Initial Charging Current less than 1.02A. Voltage 13.6V ~ 13.8V @ 25°C Temp. Coefficient -18mV/°C
	Capacity affected by Temperature	40°C 102% 25°C 100% 0°C 85%
<b>Design Floating Life at 20°C</b>	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.

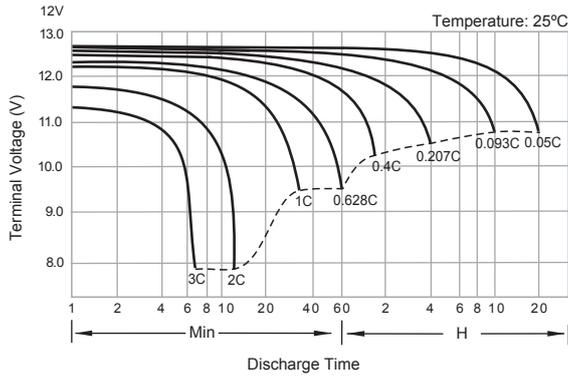
Constant Current Discharge / Constant Power Discharge At 25°C (Amperes & Watts/Cell)

A = Amperes W = Watts

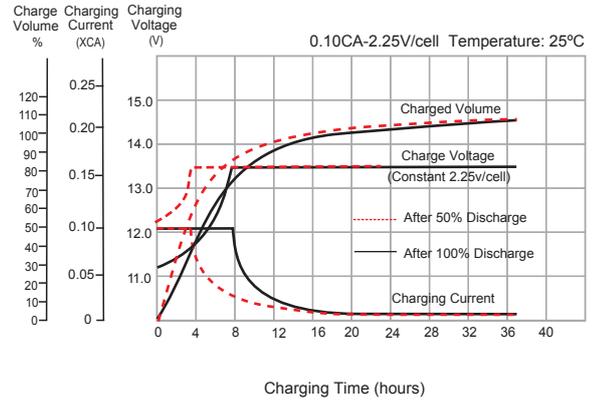
F.V/TIME	5 min	10 min	15 min	30 min	60 min	2 hours	3 hours	4 hours	5 hours	10 hours	20 hours
A	W	A	W	A	W	A	W	A	W	A	W
1.80V/cell	10.5	6.65	5.39	3.12	1.96	1.11	0.80	0.64	0.54	0.30	0.16
	118	75.0	61.5	35.8	22.7	13.0	9.51	7.62	6.50	3.61	1.94
1.75V/cell	11.2	7.05	5.69	3.24	2.02	1.14	0.83	0.66	0.56	0.31	0.17
	125	79.5	64.9	37.2	23.4	13.3	9.80	7.86	6.70	3.68	1.98
1.70V/cell	11.7	7.37	5.89	3.32	2.06	1.16	0.83	0.66	0.56	0.31	0.17
	130	83.2	67.2	38.1	23.8	13.5	9.87	7.92	6.75	3.70	1.99
1.65V/cell	12.2	7.68	6.12	3.43	2.11	1.17	0.84	0.67	0.57	0.31	0.17
	136	86.7	69.8	39.3	24.5	13.6	9.94	7.97	6.79	3.72	2.00
1.60V/cell	12.5	7.65	6.27	3.50	2.15	1.17	0.84	0.67	0.57	0.31	0.17
	140	89.3	71.5	40.1	24.8	13.7	10.0	8.02	6.83	3.74	2.01



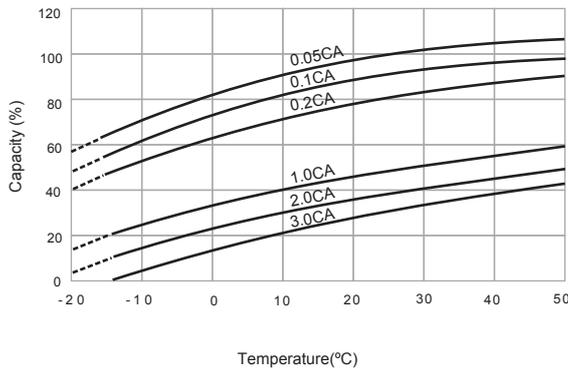
**Discharge Characteristics**



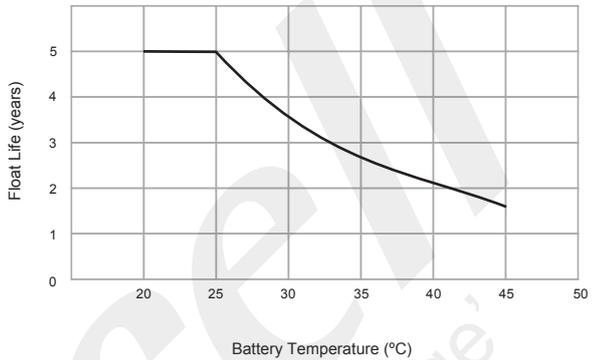
**Float Charging Characteristics**



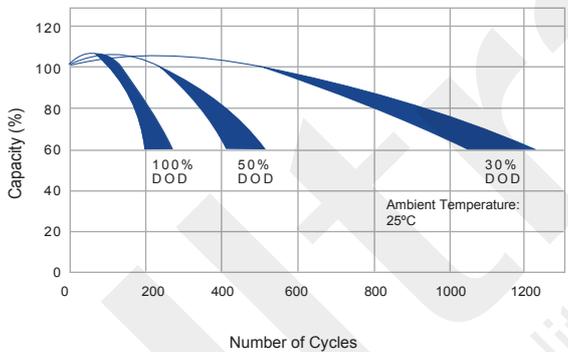
**Temperature Effects in Relation to Battery Capacity**



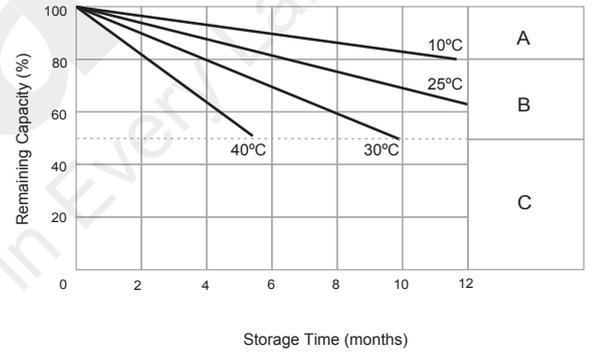
**Effects of Temperature on Long Term Float Life**



**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 2.45V/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.