

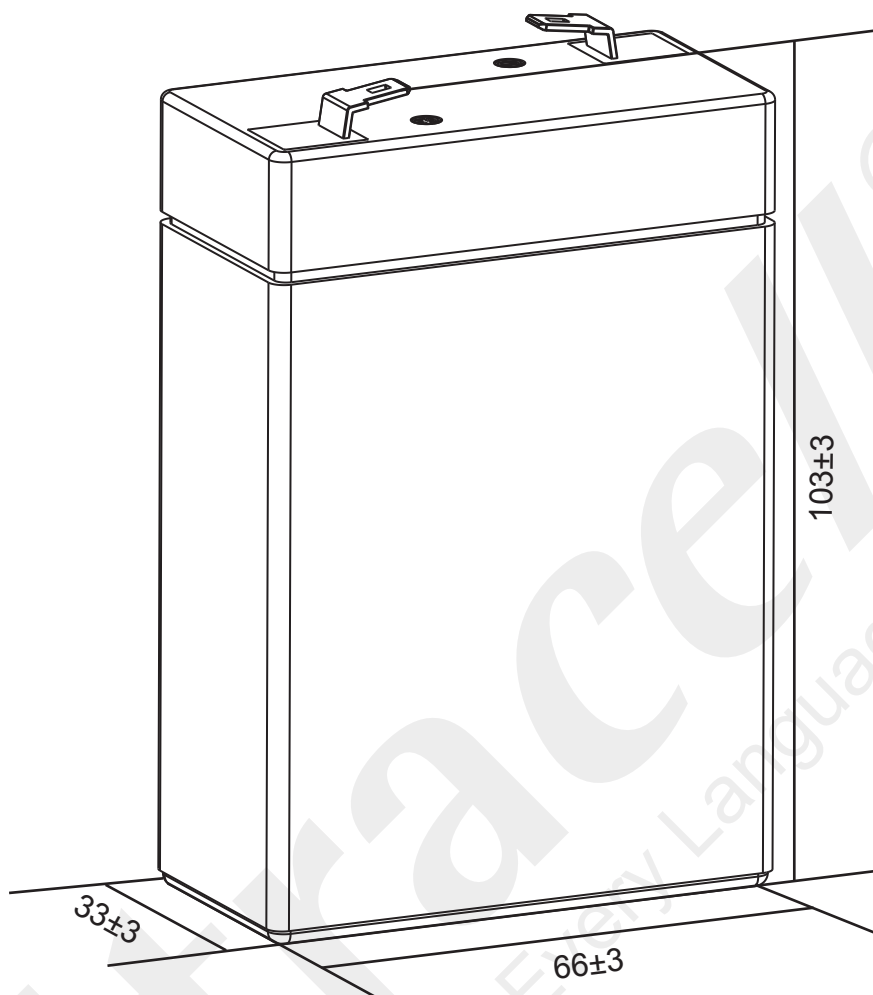
# Ultracell®

'Quality in Every Language'

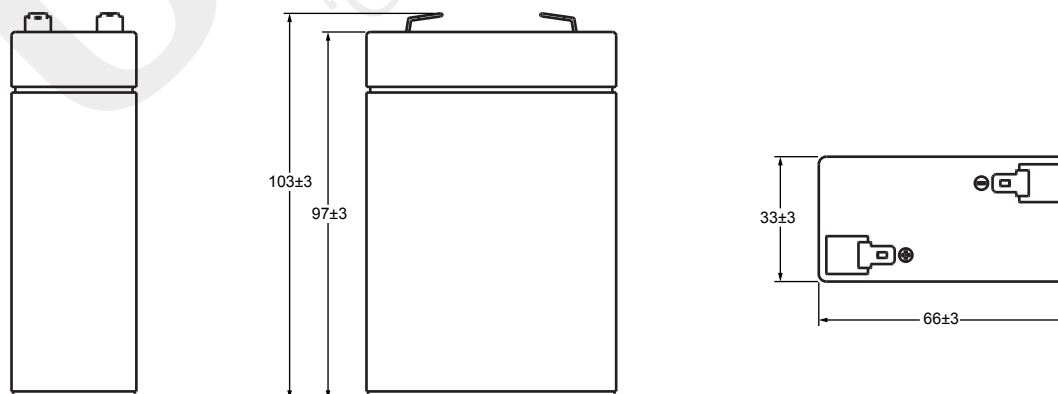
UL2.8-6

6V 2.8Ah

General Series



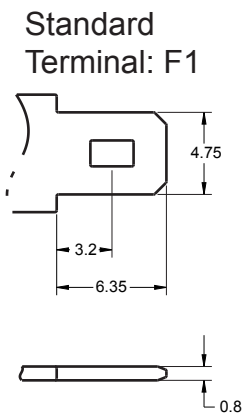
## Technical Dimensions (mm)



Image



Terminal Dimensions (mm)



Technical Specification

<b>Output</b>	Nominal Voltage	6V
	Nominal Capacity (20HR)	2.8Ah
<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)	2.80 Ah/0.140A
	(10HR 1.75V/cell, 25°C)	2.65 Ah/0.265A
	(5HR 1.75V/cell, 25°C)	2.41 Ah/0.482A
	(3HR 1.75V/cell, 25°C)	2.16 Ah/0.719A
	(1HR 1.60V/cell, 25°C)	1.89 Ah/1.89A
<b>Max Discharge Current</b>	42A (5s)	
<b>Internal Resistance</b>	Approx 22mΩ	
<b>Discharge Characteristics</b>	Operating Temp Range	Discharge: -15 ~ 50°C Charge: 0 ~ 40°C Storage: -15 ~ 40°C
	Nominal Operating Temp Range	25 ± 3°C
	Cycle Use	Initial Charging Current less than 0.84A. Voltage 7.2V ~ 7.5V @ 25°C Temp. Coefficient -15mV/°C
	Standby Use	Initial Charging Current less than 0.84A. Voltage 6.75V ~ 6.9V @ 25°C Temp. Coefficient -10mV/°C
	Capacity affected by Temperature	40°C 103% 25°C 100% 0°C 86%
<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)

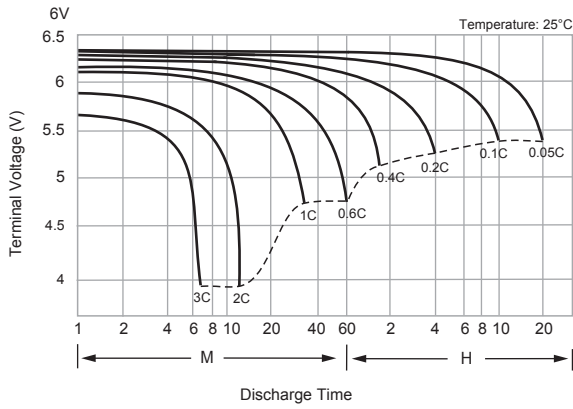
A = Amperes W = Watts

F.V/TIME	5 min	10 min	15 min	20 min	30 min	45 min	60 min	90 min	2 hours	3 hours	4 hours	5 hours	6 hours	8 hours	10 hours	20 hours
A	W	A	W	A	W	A	W	A	W	A	W	A	W	A	W	A
1.85V/cell	9.02	6.18	4.81	3.91	2.88	2.11	1.71	1.25	0.972	0.697	0.551	0.469	0.402	0.316	0.259	0.137
	17.1	11.8	9.21	7.54	5.57	4.08	3.33	2.43	1.90	1.37	1.09	0.926	0.795	0.627	0.514	0.274
1.80V/cell	9.70	6.55	5.05	4.07	2.97	2.16	1.75	1.27	0.990	0.708	0.559	0.476	0.408	0.321	0.262	0.138
	18.2	12.4	9.61	7.80	5.72	4.18	3.40	2.48	1.93	1.39	1.10	0.938	0.806	0.636	0.521	0.277
1.75V/cell	10.2	6.82	5.22	4.18	3.05	2.21	1.79	1.30	1.01	0.719	0.567	0.482	0.413	0.325	0.265	0.140
	18.9	12.8	9.87	7.97	5.84	4.25	3.46	2.51	1.96	1.41	1.11	0.949	0.814	0.642	0.525	0.280
1.70V/cell	10.7	7.09	5.39	4.30	3.12	2.26	1.82	1.32	1.02	0.730	0.575	0.489	0.418	0.328	0.268	0.141
	19.6	13.2	10.1	8.16	5.96	4.33	3.51	2.55	1.99	1.43	1.13	0.961	0.823	0.648	0.531	0.282
1.67V/cell	11.1	7.29	5.52	4.39	3.18	2.29	1.85	1.33	1.03	0.737	0.580	0.493	0.421	0.331	0.269	0.142
	20.1	13.5	10.4	8.31	6.05	4.39	3.56	2.58	2.01	1.44	1.14	0.968	0.830	0.653	0.534	0.284
1.60V/cell	11.7	7.60	5.71	4.52	3.27	2.35	1.89	1.36	1.06	0.751	0.590	0.501	0.427	0.335	0.273	0.144
	21.0	13.9	10.6	8.51	6.18	4.47	3.62	2.62	2.04	1.46	1.15	0.981	0.840	0.662	0.540	0.288

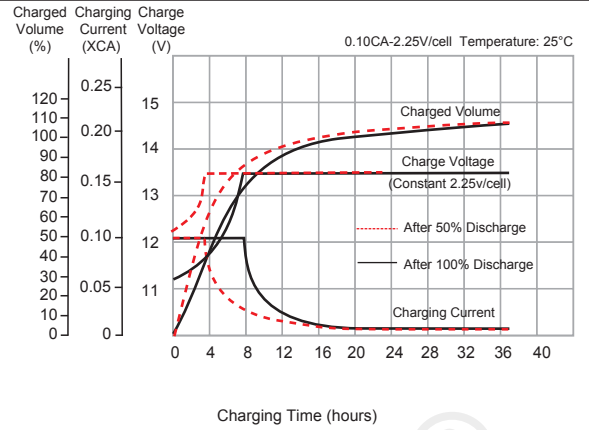




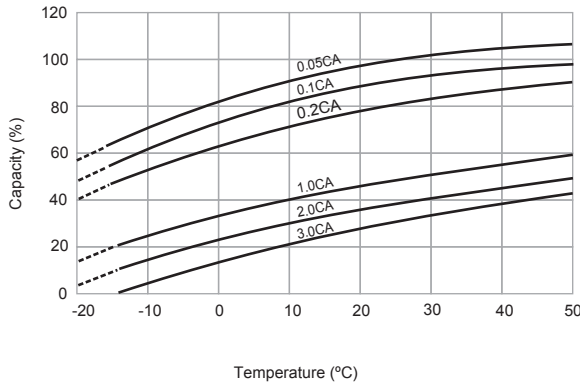
## Discharge Characteristics



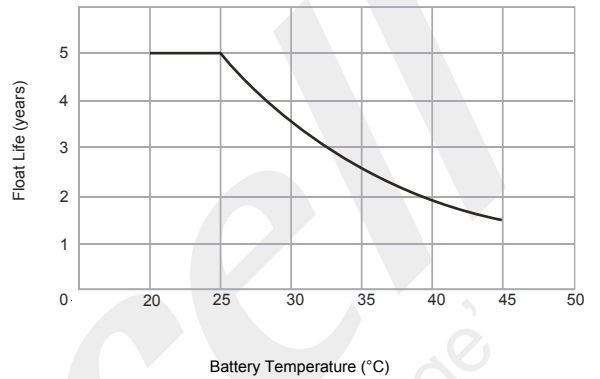
## Float Charging Characteristics



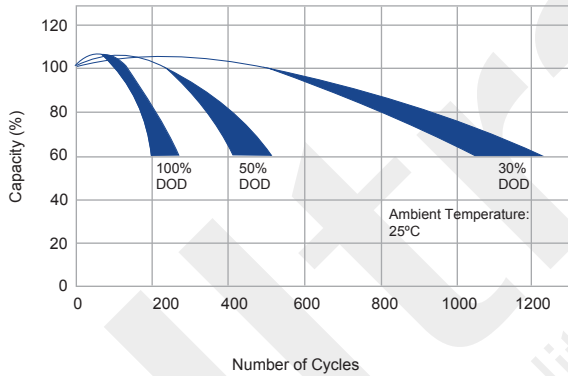
## Temperature Effects in Relation to Battery Capacity



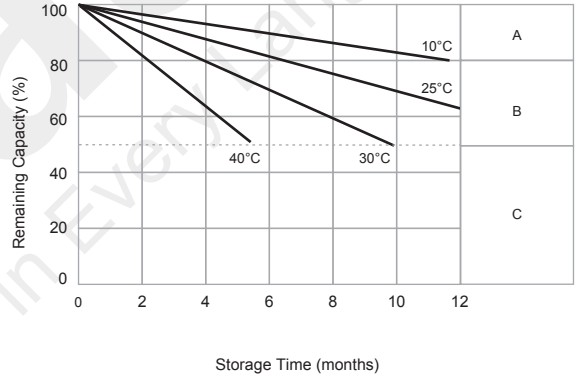
## Effects of Temperature on Long Term Float Life



## 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.