

**UL5-4**

Awaiting Image

**Physical Specification**

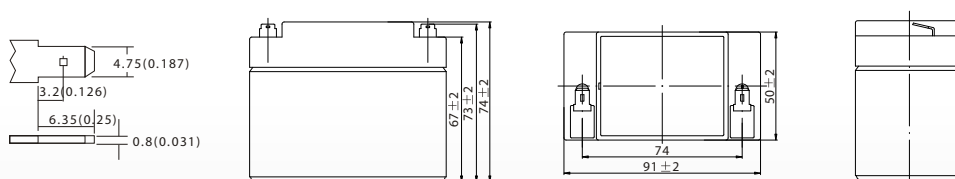
Part Number:	<b>UL5-4</b>
Length:	<b>91 ± 2 mm (3.58 inches)</b>
Width:	<b>50 ± 2 mm (1.97 inches)</b>
Container Height:	<b>74 ± 2 mm (2.91 inches)</b>
Total Height (with terminal):	<b>74 ± 2 mm (2.91 inches)</b>
Approx Weight:	<b>Approx 0.66kg (1.46lbs)</b>

**Specifications**

	Normal Voltage	4V
	Normal Capacity (20HR)	5.0AH
<b>Terminal Type</b>	Standard Terminal	F1
	Optional Terminal	F2
<b>Container Material</b>	Standard Option	ABS
	Flame Retardant Option (FR)	UL94:VO
<b>Rated Capacity</b>	5.00 AH/0.250A	(20hr, 1.80V/cell, 25°C / 77°F)
	4.65 AH/0.465A	(10hr, 1.80V/cell, 25°C / 77°F)
	4.25 AH/0.850A	(5hr, 1.75V/cell, 25°C / 77°F)
	3.84 AH/1.28A	(3hr, 1.75V/cell, 25°C / 77°F)
	3.14 AH/3.14A	(1hr, 1.60V/cell, 25°C / 77°F)
<b>Max Discharge Current</b>	75A (5s)	
<b>Internal Resistance</b>	Approx 14mΩ	
<b>Discharge Characteristics</b>	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
		Charge: 0 ~ 40°C (5 ~ 104°F)
		Storage: -15 ~ 40°C (5 ~ 104°F)
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 1.5A. Voltage 4.8V ~ 5.0V at 25°C (77°F) Temp. Coefficient -10mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 4.5V ~ 4.6V at 25°C (77°F) Temp. Coefficient -6mV/°C
Capacity affected by Temperature	40°C (104°F) 103%	
	25°C (77°F) 100%	
	0°C (32°F) 86%	
<b>Design Floating Life at 20°C</b>	5 Years	
<b>Self Discharge</b>	Ultracell batteries may be stored for up to 6 months at 25°C(77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.	

**Dimensions**

**F1 Terminal**



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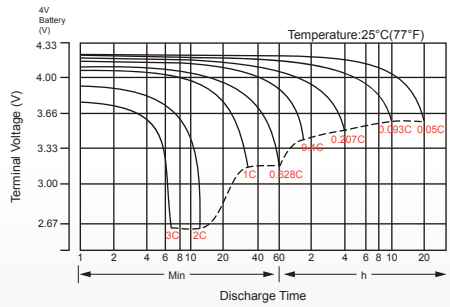
### Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	9.52	7.31	6.06	5.24	4.05	2.98	2.51	1.49	1.16	0.95	0.77	0.67	0.540	0.451	0.248
1.80V/cell	12.8	9.34	7.32	6.19	4.78	3.47	2.82	1.62	1.25	1.01	0.83	0.72	0.573	0.465	0.250
1.75V/cell	14.4	10.3	7.99	6.66	4.96	3.60	2.95	1.68	1.28	1.03	0.85	0.74	0.583	0.4778	0.253
1.70V/cell	15.9	11.2	8.53	7.00	5.16	3.74	3.04	1.73	1.31	1.06	0.87	0.75	0.591	0.487	0.257
1.65V/cell	17.5	12.1	9.07	7.44	5.45	3.84	3.11	1.75	1.37	1.10	0.90	0.77	0.600	0.497	0.261
1.60V/cell	19.3	13.1	9.71	7.92	5.75	4.00	3.14	1.83	1.41	1.13	0.93	0.79	0.606	0.503	0.262

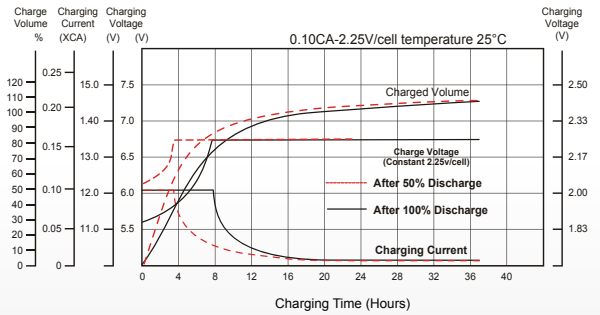
### Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	17.4	13.5	11.3	9.87	7.72	5.73	4.85	2.89	2.27	1.85	1.51	1.32	1.066	0.893	0.490
1.80V/cell	23.1	17.1	13.5	11.5	8.97	6.62	5.40	3.13	2.43	1.96	1.62	1.41	1.127	0.919	0.495
1.75V/cell	25.5	18.4	14.5	12.3	9.23	6.80	5.63	3.23	2.46	2.00	1.65	1.44	1.144	0.942	0.499
1.70V/cell	27.3	19.6	15.3	12.8	9.56	7.05	5.79	3.31	2.53	2.05	1.69	1.47	1.159	0.960	0.507
1.65V/cell	29.7	21.0	16.1	13.5	10.0	7.16	5.88	3.34	2.62	2.11	1.73	1.50	1.174	0.979	0.514
1.60V/cell	32.0	22.3	17.0	14.2	10.5	7.42	5.90	3.46	2.69	2.17	1.78	1.52	1.183	0.988	0.516

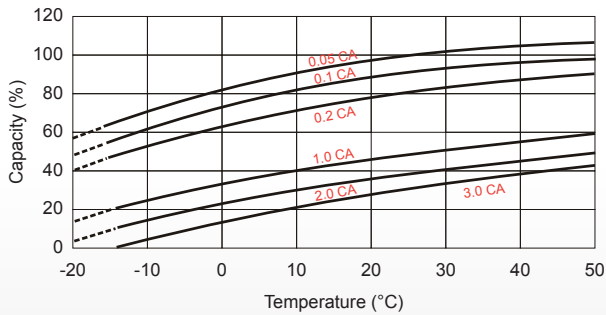
### Discharge Characteristics



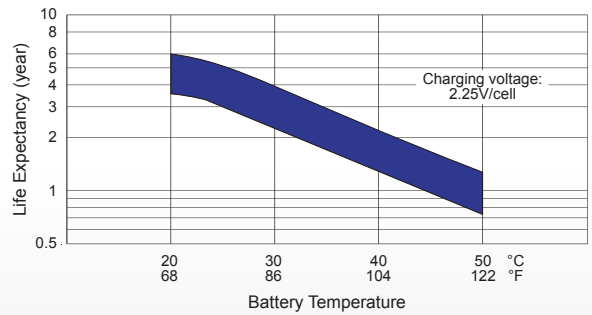
### Float Charging Characteristics



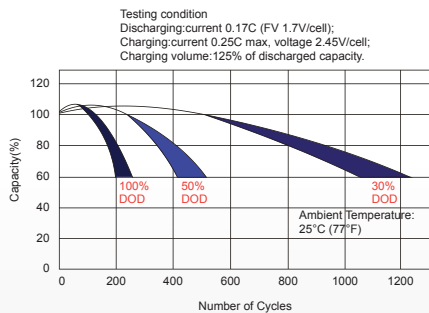
### Temperature Effects in Relation to Battery Capacity



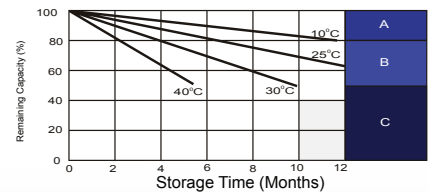
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics



- A** No supplementary 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.

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