

### UL1.3-12



### Physical Specification

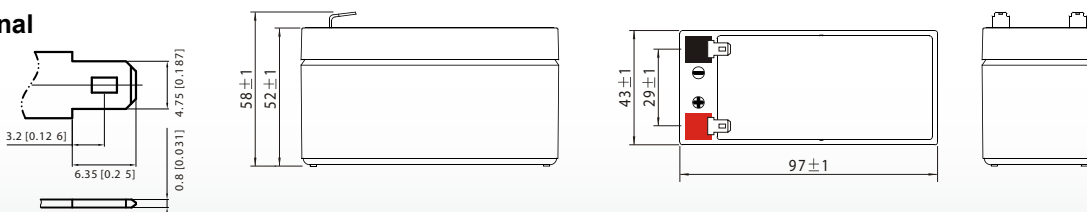
Part Number:	<b>UL1.3-12</b>
Length:	<b>97 ± 2 mm (3.82 inches)</b>
Width:	<b>43 ± 2 mm (1.69 inches)</b>
Container Height:	<b>52 ± 2 mm (2.04 inches)</b>
Total Height (with terminal):	<b>58 ± 2 mm (2.28 inches)</b>
Approx Weight:	<b>Approx 0.55 kg</b>

### Specifications

	Nominal Voltage	12V	
	Nominal Capacity (20HR)	1.3 AH	
Terminal Type	Standard Terminal	F1	
	Optional Terminal	-	
Container Material	Standard Option	ABS	
	Flame Retardant Option (FR)	ABS (UL94:VO)	
Rated Capacity	1.30 AH/0.600A	(20hr, 1.80V/cell, 25°C / 77°F)	
	1.20 AH/0.112A	(10hr, 1.80V/cell, 25°C / 77°F)	
	1.02 AH/0.204A	(5hr, 1.75V/cell, 25°C / 77°F)	
	9.18 AH/0.306A	(3hr, 1.75V/cell, 25°C / 77°F)	
	0.754 AH/0.754A	(1hr, 1.60V/cell, 25°C / 77°F)	
Max Discharge Current	18A (5s)		
Internal Resistance	Approx 90mΩ		
Discharge Characteristics	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 0.36 A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C	
	Standby Use	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C	
	Capacity affected by Temperature	40°C (104°F)	103%
25°C (77°F)		100%	
0°C (32°F)		86%	
Design Floating Life at 20°C	5 Years		
Self Discharge	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



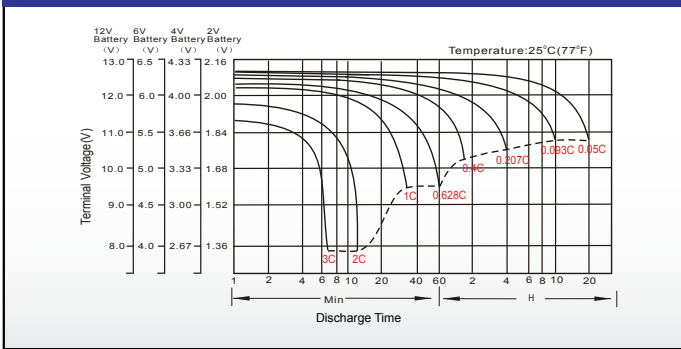
## Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2.29	1.75	1.45	1.26	0.97	0.716	0.603	0.357	0.279	0.227	0.185	0.161	0.130	0.108	0.0594
1.80V/cell	3.07	2.24	1.76	1.49	1.15	0.833	0.676	0.390	0.300	0.242	0.199	0.172	0.137	0.112	0.0600
1.75V/cell	3.46	2.46	1.92	1.60	1.19	0.864	0.707	0.404	0.306	0.248	0.204	0.177	0.140	0.115	0.0606
1.70V/cell	3.81	2.69	2.05	1.68	1.24	0.899	0.729	0.414	0.315	0.254	0.209	0.181	0.142	0.117	0.0617
1.65V/cell	4.20	2.90	2.18	1.78	1.31	0.921	0.746	0.420	0.328	0.263	0.215	0.185	0.144	0.119	0.0625
1.60V/cell	4.63	3.15	2.33	1.90	1.38	0.960	0.754	0.438	0.338	0.271	0.222	0.189	0.145	0.121	0.0629

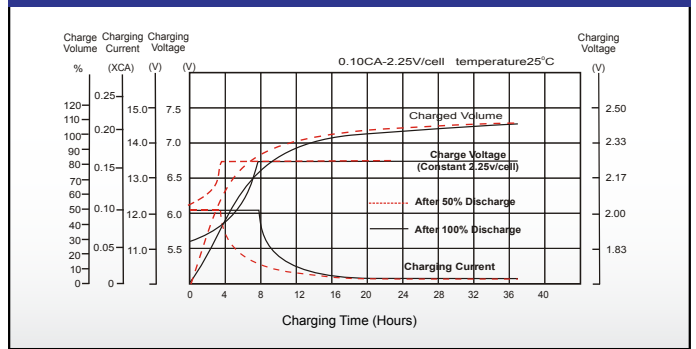
## Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.18	3.24	2.71	2.37	1.85	1.38	1.16	0.693	0.544	0.444	0.363	0.316	0.256	0.214	0.118
1.80V/cell	5.55	4.09	3.23	2.76	2.15	1.59	1.30	0.751	0.582	0.471	0.388	0.337	0.271	0.221	0.119
1.75V/cell	6.12	4.43	3.49	2.94	2.22	1.63	1.35	0.776	0.591	0.480	0.397	0.346	0.275	0.226	0.120
1.70V/cell	6.56	4.71	3.67	3.07	2.29	1.69	1.39	0.794	0.606	0.492	0.406	0.352	0.278	0.231	0.122
1.65V/cell	7.13	5.04	3.87	3.23	2.40	1.72	1.41	0.801	0.629	0.507	0.416	0.359	0.282	0.235	0.123
1.60V/cell	7.68	5.35	4.08	3.41	2.52	1.78	1.42	0.831	0.645	0.521	0.428	0.365	0.284	0.237	0.124

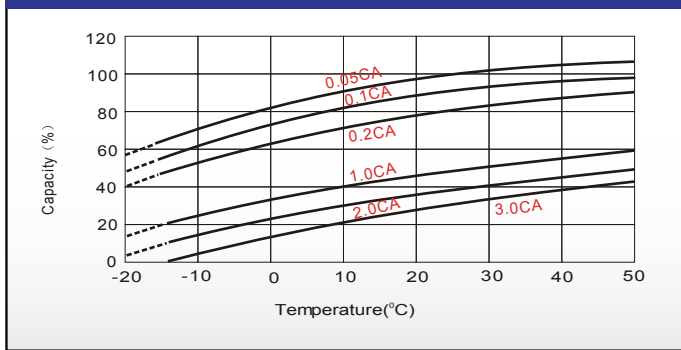
### Discharge Characteristics



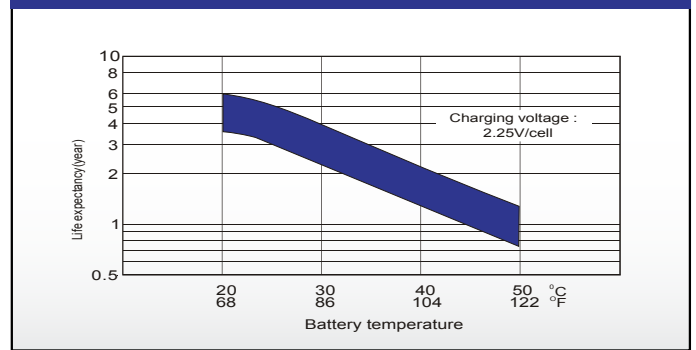
### Float Charging Characteristics



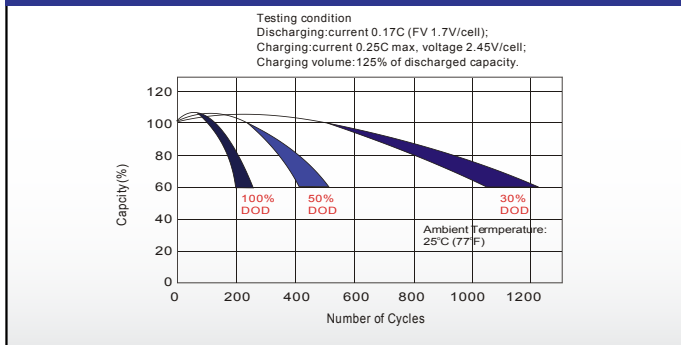
### Temperature Effects in Relation to Battery Capacity



### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics

