

UL18 -12



Physical Specification

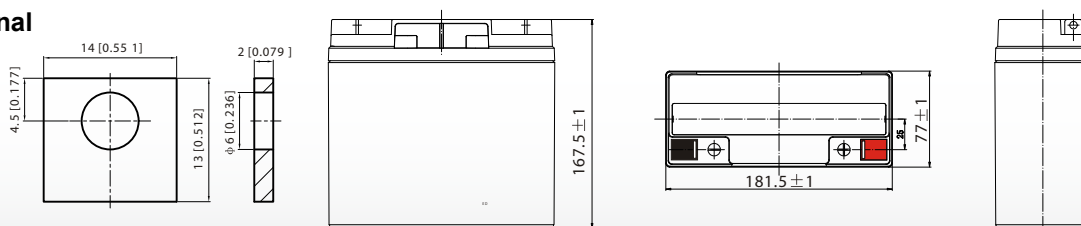
Part Number:	UL18-12
Length:	181.5 ± 2 mm (5.95 inches)
Width:	77 ± 2 mm (3.85 inches)
Container Height:	167.5 ± 2 mm (3.74 inches)
Total Height (with terminal):	167.5 ± 2 mm (3.98 inches)
Approx Weight:	Approx 5.35kg (11.73lbs)

Specifications

	Nominal Voltage	12V
	Nominal Capacity (20HR)	18AH
Terminal Type	Standard Terminal	F3
	Optional Terminal	-
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
Rated Capacity	18.0 AH/0.90A	(20hr, 1.80V/cell, 25°C / 77°F)
	16.7 AH/1.67A	(10hr, 1.80V/cell, 25°C / 77°F)
	15.3 AH/3.06A	(5hr, 1.75V/cell, 25°C / 77°F)
	13.8 AH/4.59A	(3hr, 1.75V/cell, 25°C / 77°F)
	11.3 AH/11.3A	(1hr, 1.60V/cell, 25°C / 77°F)
Max Discharge Current	270A (5s)	
Internal Resistance	Approx 16mΩ	
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 5.4A. 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

F3 Terminal



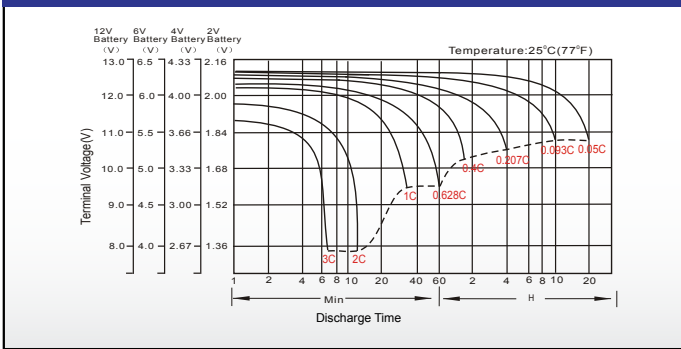
Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	34.3	26.0	22.7	19.9	15.6	11.6	9.36	5.56	4.17	3.39	2.87	2.49	1.98	1.63	0.89
1.80V/cell	41.9	30.8	26.5	22.7	17.2	12.7	10.1	5.97	4.39	3.54	2.98	2.57	2.03	1.67	0.90
1.75V/cell	47.5	33.8	28.4	24.1	18.1	13.3	10.6	6.18	4.55	3.64	3.04	2.62	2.07	1.70	0.91
1.70V/cell	52.7	36.8	30.3	25.4	18.9	13.8	10.9	6.34	4.67	3.73	3.11	2.68	2.10	1.72	0.92
1.65V/cell	57.2	39.2	32.2	26.6	19.8	14.3	11.3	6.51	4.75	3.79	3.17	2.72	2.12	1.74	0.93
1.60V/cell	60.9	41.7	34.1	28.0	20.5	14.9	11.7	6.69	4.86	3.87	3.22	2.76	2.15	1.76	0.94

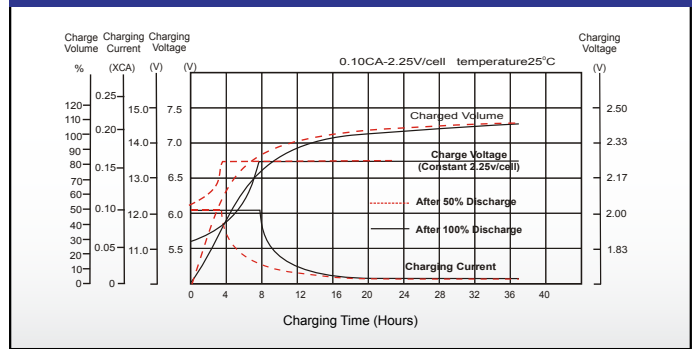
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	65.0	49.8	43.8	38.7	30.5	22.9	18.5	11.1	8.33	6.79	5.77	5.01	3.99	3.31	1.81
1.80V/cell	78.7	58.5	50.9	43.9	33.5	24.9	20.0	11.8	8.74	7.08	5.97	5.16	4.10	3.38	1.82
1.75V/cell	88.4	63.7	54.3	46.4	35.1	26.0	20.9	12.2	9.02	7.24	6.07	5.25	4.15	3.41	1.83
1.70V/cell	97.2	68.9	57.5	48.7	36.6	26.9	21.5	12.5	9.24	7.40	6.20	5.34	4.20	3.45	1.84
1.65V/cell	104.7	72.8	60.7	50.8	38.1	27.8	22.2	12.8	9.39	7.51	6.30	5.41	4.24	3.48	1.86
1.60V/cell	110.4	77.0	63.9	53.2	39.4	28.8	22.9	13.1	9.57	7.65	6.38	5.47	4.28	3.51	1.87

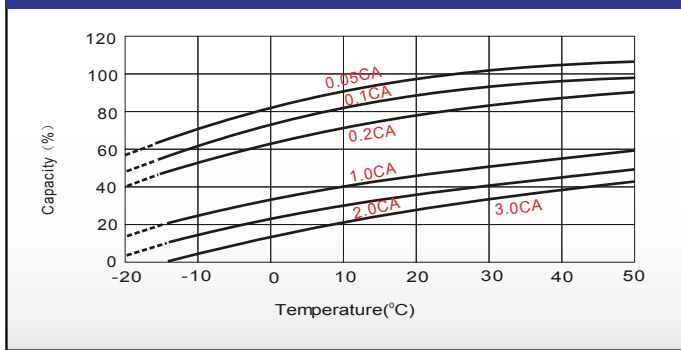
Discharge Characteristics



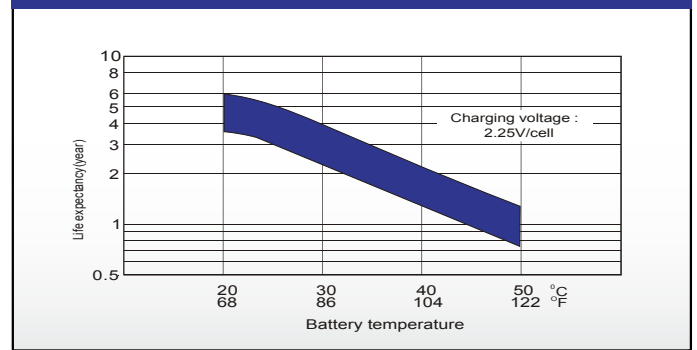
Float Charging Characteristics



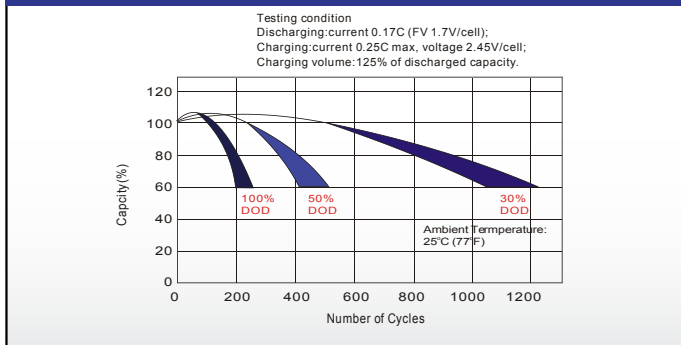
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics

