

### UL70-12



### Physical Specification

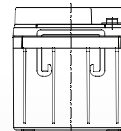
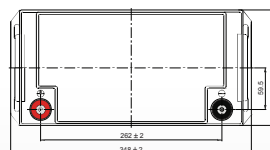
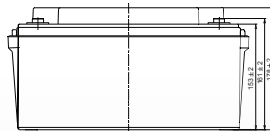
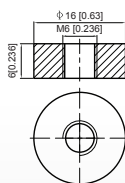
Part Number:	<b>UL70-12</b>
Length:	<b>348 ± 2 mm (13.70 inches)</b>
Width:	<b>167 ± 2 mm (6.57 inches)</b>
Container Height:	<b>178 ± 2 mm (7.01 inches)</b>
Total Height (with terminal):	<b>178 ± 2 mm (7.01 inches)</b>
Approx Weight:	<b>Approx 21.6kg (47.6lbs)</b>

### Specifications

	Normal Voltage	12V
	Normal Capacity (20HR)	70AH
<b>Terminal Type</b>	Standard Terminal	F6
	Optional Terminal	F10
<b>Container Material</b>	Standard Option	ABS
	Flame Retardant Option (FR)	UL94:VO
<b>Rated Capacity</b>	72.8 AH/3.64A	(20hr, 1.80V/cell, 25°C / 77°F)
	70.0 AH/7.00A	(10hr, 1.80V/cell, 25°C / 77°F)
	60.3 AH/12.1A	(5hr, 1.75V/cell, 25°C / 77°F)
	54.6 AH/18.2A	(3hr, 1.75V/cell, 25°C / 77°F)
	42.7 AH/42.7A	(1hr, 1.60V/cell, 25°C / 77°F)
<b>Max Discharge Current</b>	840A (5s)	
<b>Internal Resistance</b>	Approx 6.6mΩ	
<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 21.0A. 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%	
<b>Design Floating Life at 20°C</b>	10 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

#### F6 Terminal



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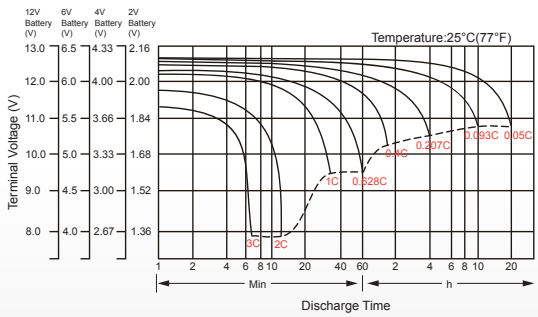
### Constant Current Discharge (Amperes) at 25°C (77°F)

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	119.8	94.2	80.1	67.0	53.2	40.3	33.0	21.0	16.6	13.6	10.9	9.53	7.74	6.61	3.61
1.80V/cell	160.8	120.4	96.8	79.2	62.8	46.9	37.0	22.9	17.9	14.5	11.7	10.2	8.20	7.00	3.64
1.75V/cell	181.3	132.2	105.7	85.2	65.2	48.6	38.7	23.8	18.2	14.8	12.0	10.5	8.34	7.07	3.68
1.70V/cell	199.7	144.1	112.9	89.5	67.9	50.6	39.9	24.7	18.7	15.2	12.4	10.7	8.46	7.14	3.75
1.65V/cell	220.2	155.6	120.0	95.1	71.6	51.8	41.2	25.4	19.5	15.7	12.7	11.0	8.60	7.29	3.79
1.60V/cell	242.8	168.9	128.3	101.3	75.6	54.0	42.7	26.3	20.1	16.2	13.1	11.2	8.68	7.36	3.82

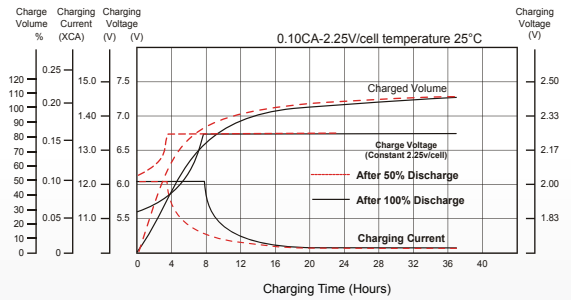
### Constant Power Discharge (Watts) at 25°C (77°F)

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	219.1	174.0	149.5	126.3	101.5	77.5	63.6	40.8	32.4	26.5	21.4	18.7	15.3	13.0	7.14
1.80V/cell	290.9	219.7	178.2	147.1	117.9	89.4	70.9	44.2	34.7	28.2	22.9	20.0	16.1	13.8	7.20
1.75V/cell	321.0	237.5	192.2	156.7	121.4	91.9	73.9	45.7	35.2	28.7	23.5	20.5	16.4	13.9	7.26
1.70V/cell	343.7	253.0	202.4	163.5	125.7	95.2	75.9	47.4	36.1	29.4	24.0	20.9	16.6	14.1	7.39
1.65V/cell	373.6	270.6	213.5	172.4	131.5	96.7	77.9	48.5	37.4	30.3	24.6	21.3	16.8	14.3	7.48
1.60V/cell	402.6	287.1	224.6	181.6	137.8	100.2	80.3	49.9	38.4	31.2	25.3	21.7	17.0	14.5	7.51

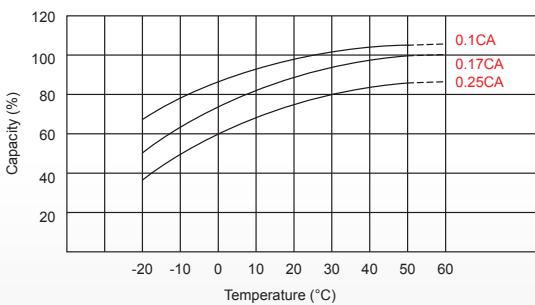
### Discharge Characteristics



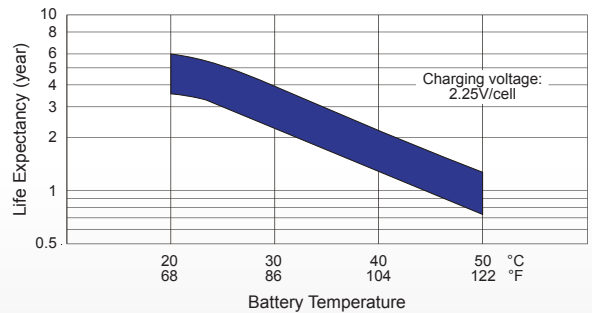
### Float Charging Characteristics



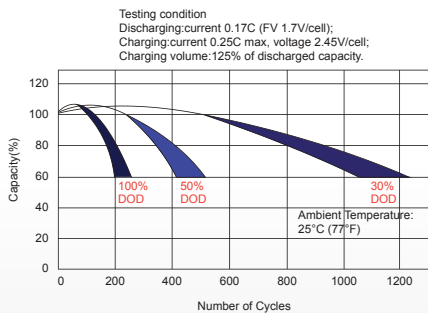
### Temperature Effects in Relation to Battery Capacity



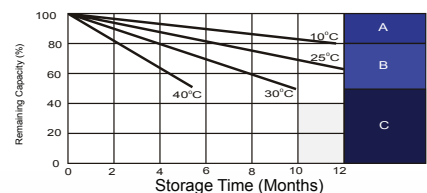
### Effect of Temperature on Long Term Float Life



### 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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