

WP1223A 12Volt 2.1Ah

(Thermal Protector)

Specifications

Nominal Voltage(V) **12V**

Nominal Capacity

20 hour rate	(0.105A to 10.50V)	2.1Ah
10 hour rate	(0.2A to 10.50V)	2.0Ah
5 hour rate	(0.357A to 10.20V)	1.79Ah
1 C	(2.1A to 9.60V)	0.95Ah

Weight **Approx. 714g(1.57Lbs.)**

Internal Resistance (at 1KHz) **Approx. 59 mΩ**

Maximum Temperature Resistance **70°C**

Maximum Current Resistance **10A**

Charging Methods at 25°C (77°F)

Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient **-5.0mV/°C/cell**

Maximum Charging Current : **0.63A**

Standby use:

Float Charging Voltage **13.5 to 13.8V**

Coefficient **-3.0mV/°C/cell**

Operating Temperature Range

Charge **-15°C (5°F) to 40°C (104°F)**

Discharge **-15°C (5°F) to 50°C (122°F)**

Storage **-15°C (5°F) to 40°C (104°F)**

Charge Retention (shelf life) at 20°C (68°F)

1 month **92%**

3 month **90%**

6 month **80%**

Case Material **ABS**

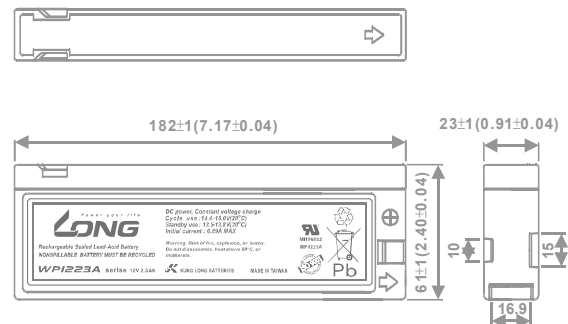
(Option: UL94 HB & UL94 V-0 flame retardant)

Terminal **F13**

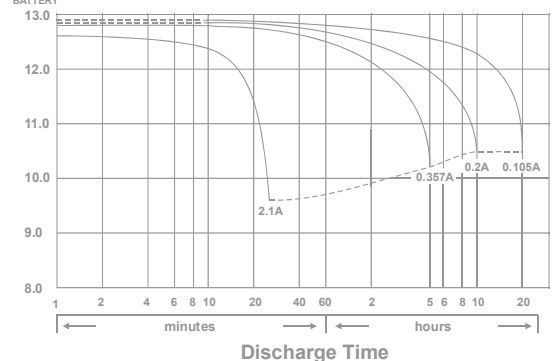


Dimensions

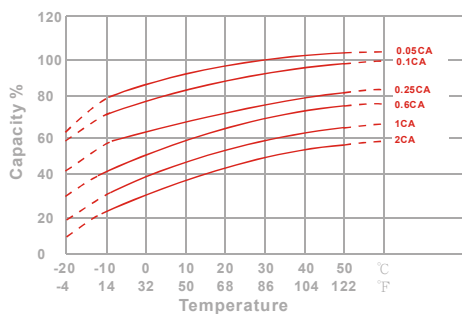
mm(inch)



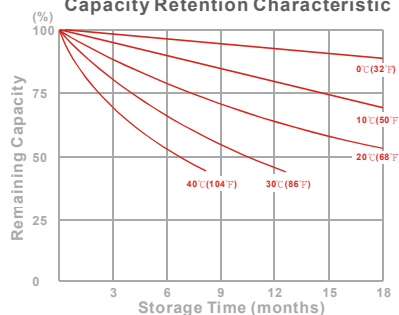
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



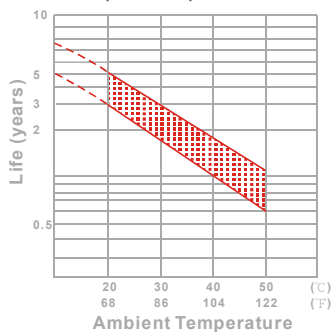
Effect of Temperature on Capacity 25°C(77°F)



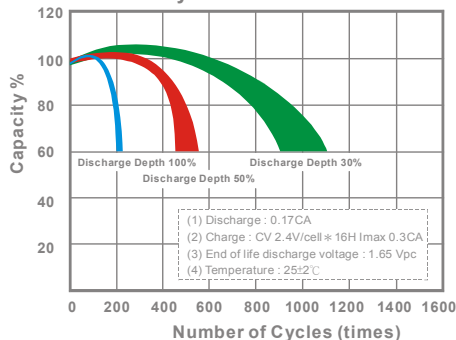
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



- PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25°C(77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
5	min	56.7	65.4	71.5	76.7	78.8	81.0	84.1
10	min	46.6	51.1	54.2	57.0	58.2	59.5	61.8
15	min	42.0	43.3	45.1	46.6	47.2	47.9	48.8
30	min	24.0	25.6	26.8	27.7	28.0	28.4	28.9
60	min	14.8	16.1	16.6	17.0	17.3	17.7	18.3
120	min	7.73	8.41	8.75	9.01	9.17	9.35	9.66
180	min	5.52	5.99	6.38	6.77	6.91	7.10	7.34
240	min	4.22	4.61	4.87	5.04	5.16	5.29	5.49
300	min	3.21	3.58	3.89	4.17	4.28	4.40	4.57
600	min	2.05	2.27	2.38	2.45	2.50	2.57	2.67
1200	min	1.22	1.29	1.34	1.38	1.39	1.41	1.43

- Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
5	min	5.33	5.97	6.55	7.04	7.26	7.51	7.82
10	min	3.65	4.16	4.58	4.97	5.14	5.33	5.54
15	min	3.23	3.6	3.86	4.07	4.16	4.25	4.36
30	min	1.78	2.06	2.27	2.46	2.53	2.61	2.69
60	min	1.18	1.29	1.36	1.42	1.44	1.47	1.51
120	min	0.630	0.681	0.725	0.766	0.783	0.802	0.824
180	min	0.442	0.490	0.532	0.566	0.578	0.590	0.604
240	min	0.353	0.396	0.414	0.430	0.435	0.441	0.450
300	min	0.316	0.338	0.351	0.362	0.366	0.370	0.375
600	min	0.185	0.197	0.204	0.210	0.212	0.215	0.218
1200	min	0.094	0.101	0.106	0.111	0.113	0.115	0.117

All data on the spec. sheet is an average value:

The tolerance range : $X < 6\text{min}$ (+15%~-15%), $6\text{min} \leq X < 10\text{min}$ (+12%~-12%), $10\text{min} \leq X < 60\text{min}$ (+8%~-8%), $X \geq 60\text{min}$ (+5%~-5%)