

## WP1223A 12Volt 2.1Ah

(Thermal Protector)

### Specifications

Nominal Voltage(V) **12V**

#### Nominal Capacity

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

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

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

Maximum Temperature Resistance **70**

Maximum Current Resistance **10A**

#### Charging Methods at 25 (77 )

Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient -5.0mV/ /cell

Maximum Charging Current : **0.63A**

Standby use:

Float Charging Voltage **13.5 to 13.8V**

Coefficient -3.0mV/ /cell

#### Operating Temperature Range

Charge **-15 (5 ) to 40 (104 )**

Discharge **-15 (5 ) to 50 (122 )**

Storage **-15 (5 ) to 40 (104 )**

#### Charge Retention (shelf life) at 20 (68 )

1 month **92%**

3 month **90%**

6 month **80%**

Case Material **ABS UL94 HB**

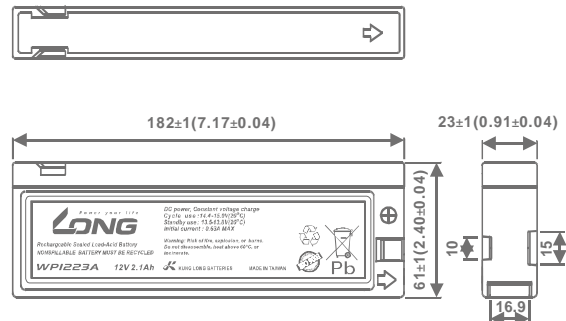
Option: Flammability resistance of (UL94 V-0)

Terminal **F13**

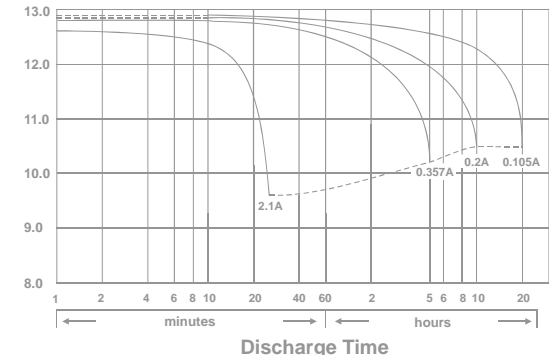


### Dimensions

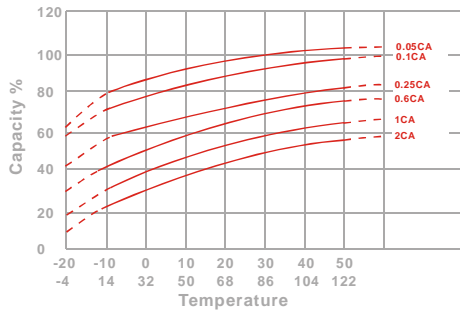
mm(inch)



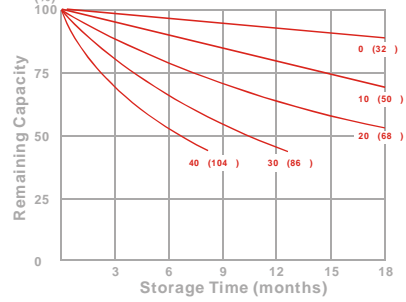
Discharge Time VS. Discharge Current (25 )



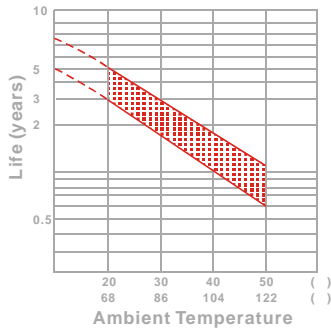
Effect of Temperature on Capacity 25 ( 77 )



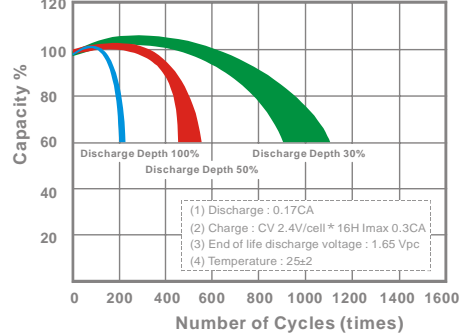
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



## - PERFORMANCE DATA

### Discharge Rates in Watts to Various End Voltages at 25 ( 77 )

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
<b>Time</b>								
5	min	9.45	10.9	11.9	12.8	13.1	13.5	14.0
10	min	7.77	8.52	9.03	9.50	9.70	9.92	10.30
15	min	7.00	7.22	7.52	7.77	7.87	7.98	8.13
30	min	4.00	4.27	4.47	4.62	4.67	4.73	4.82
60	min	2.47	2.68	2.77	2.83	2.88	2.95	3.05
120	min	1.29	1.40	1.46	1.50	1.53	1.56	1.61
180	min	0.920	0.998	1.06	1.13	1.15	1.18	1.22
240	min	0.703	0.768	0.812	0.840	0.860	0.882	0.915
300	min	0.535	0.597	0.648	0.695	0.713	0.733	0.762
600	min	0.342	0.378	0.397	0.408	0.417	0.428	0.445
1200	min	0.203	0.215	0.223	0.230	0.232	0.235	0.238

### - Discharge Rates in Amperes to Various End Voltages at 25 ( 77 )

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
<b>Time</b>								
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<6min(+15%~-15%), 6min X<10min(+12%~-12%),10min X < 60min(+8%~-8%), X 60min(+5%~-5%)