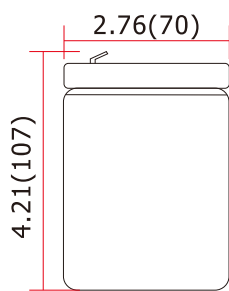
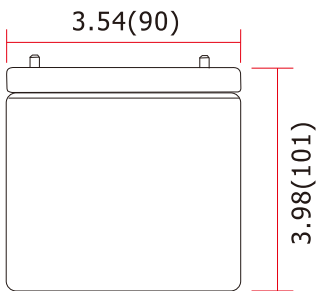
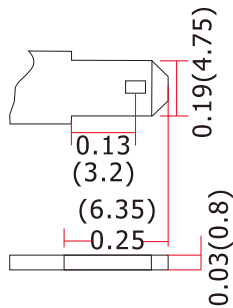
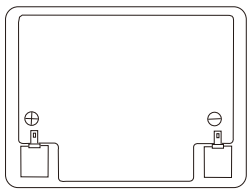
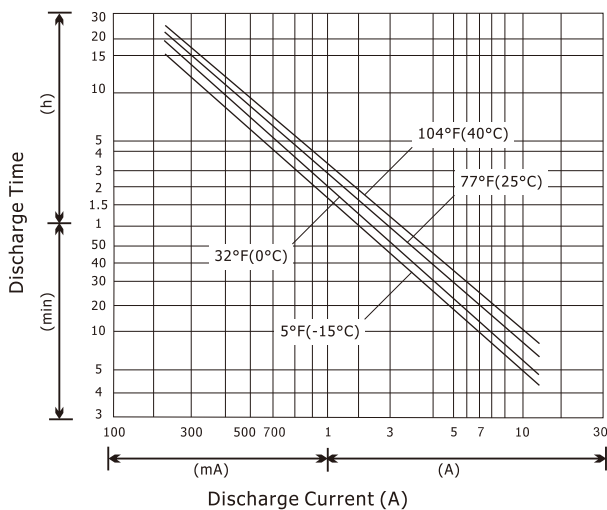


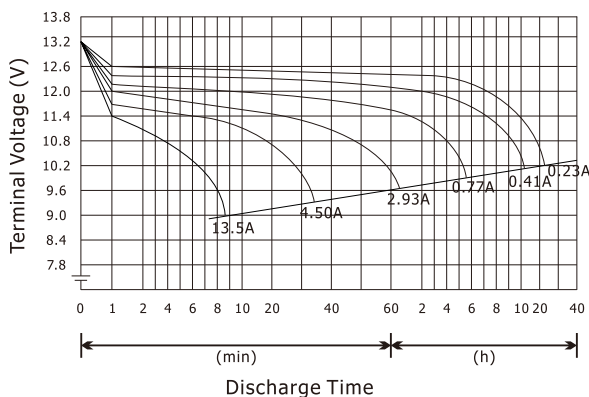
Unit:inch(mm)



### Discharge Current and Discharge Duration Time



Discharge Curves 77°F(25°C)



### Specification

Nominal Voltage	12V	
Rated Capacity (20hr Rate)	4.5Ah	
Dimensions	Length	3.54inches (90mm)
	Width	2.76inches (70mm)
	Height	3.98inches (101mm)
	Total Height	4.21inches (107mm)
Weight	Approx. 3.17lbs (1.44kg)	
<b>Characteristics</b>		
Capacity 77°F(25°C)	20hour rate (0.23A)	4.50Ah
	10hour rate (0.41A)	4.10Ah
	5hour rate (0.77A)	3.80Ah
	1hour rate (2.93A)	2.90Ah
Internal Resistance	Full Charged, 77°F(25°C)	50mΩ
Capacity Affected By Temperature (10hr Rate)	104°F(40°C)	102%
	77°F(25°C)	100%
	32°F(0°C)	85%
	5°F(-15°C)	65%
Self-Discharge 77°F(25°C)	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 9 month storage	60%
Charge (Constant Voltage)	Initial Charge Current "LESS" than 1.35A	
	Cycle	14.4-15.0V/77°F(25°C)
	Stand By	13.5-13.8V/77°F(25°C)

\*\*These data are average values obtained from three Charge/Discharge cycles. Note: These are NOT minimum values.

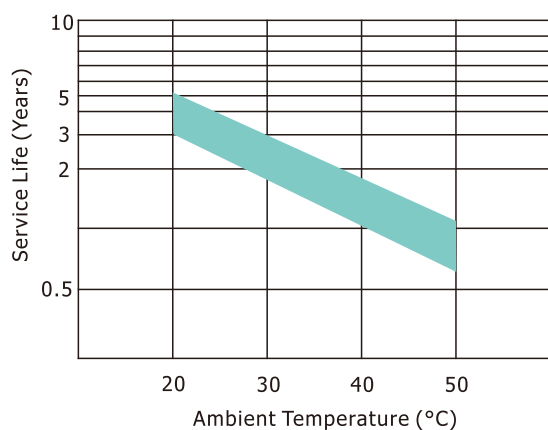
### Constant Current Discharge Characteristics Unit: A (25°C / 77°F)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	5HR	8HR	10HR	20HR
9.6V	16.7	11.5	8.60	5.30	3.20	1.78	1.30	0.83	0.55	0.45	0.24
10.0V	15.5	10.8	8.20	5.10	3.10	1.74	1.28	0.82	0.54	0.44	0.24
10.2V	14.9	10.5	8.00	5.00	3.00	1.72	1.26	0.81	0.54	0.44	0.23
10.5V	13.6	9.90	7.70	4.80	3.00	1.69	1.24	0.80	0.53	0.43	0.23
10.8V	12.3	9.20	7.20	4.60	2.90	1.65	1.22	0.78	0.51	0.42	0.22
11.1V	10.8	8.20	6.60	4.50	2.80	1.62	1.17	0.77	0.50	0.42	0.21

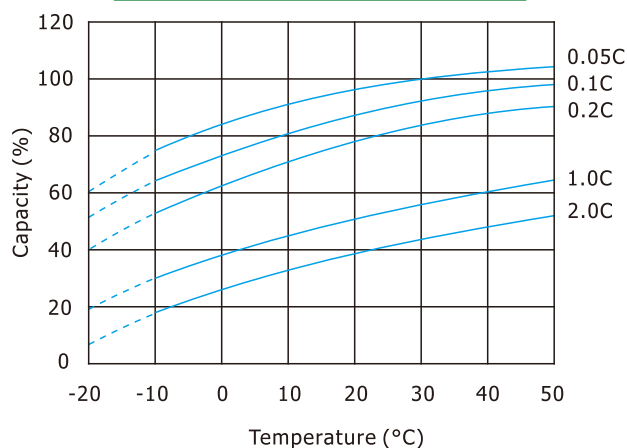
### Constant Power Discharge Characteristics Unit: W (25°C / 77°F)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	5HR	8HR	10HR	20HR
9.6V	180	127	100	61.1	35.6	20.2	14.8	9.60	6.30	5.10	2.70
10.0V	166	119	93.9	59.3	34.9	19.9	14.4	9.50	6.20	5.00	2.70
10.2V	158	116	91.2	58.4	34.5	19.7	14.2	9.30	6.10	5.00	2.60
10.5V	145	108	86.3	56.6	33.8	19.3	14.0	9.10	6.00	4.90	2.60
10.8V	131	100	81.0	54.3	33.0	18.9	13.6	8.90	5.90	4.80	2.50
11.1V	117	91	75.8	51.8	32.0	18.4	13.2	8.60	5.70	4.60	2.50

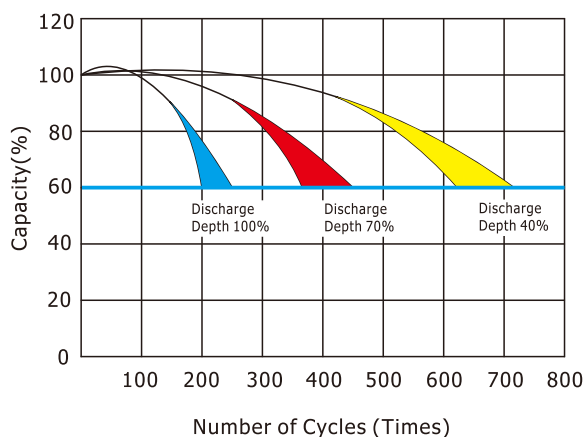
#### Trickle / Float Service Life



#### Effect of Temperature on Capacity



#### Cycle Service Life (@25°C/77°F)



#### Capacity Retention Characteristic

