



Specifications

Nominal Voltage		12V
Rated Capacity (20 hour rate)		4.5Ah
Dimensions	Total Height	107±2mm(4.21 inches)
	Height	101±2mm(3.98 inches)
	Length	90±2mm(3.54 inches)
	Width	70±2mm(2.76 inches)
Weight Approx		1.43kg(3.16 lbs)± 4%

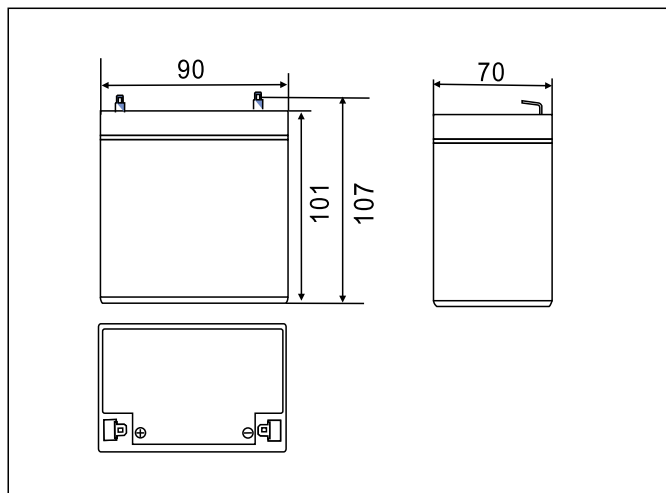
Characteristics

Capacity 25°C(77°F)	20 hour rate(0.225A)	4.50 AH
	10 hour rate(0.42A)	4.20 AH
	5 hour rate(0.78A)	3.90AH
	1 hour rate(2.93A)	2.93 AH
Internal Resistance	Full charged Battery at 25°C(77°F)	45mΩ
Capacity affected by Temperature (20hour rate)	40°C(104°F)	102%
	25°C(77°F)	100%
	0°C(32°F)	85%
	-15°C(5°F)	65%
Self-Discharge at 25°C(77°F)	Capacity after 3 month storage	91%
	Capacity after 6 month storage	82%
	Capacity after 12 month storage	64%
Charge (constant voltage)	Cycle	Initial Charging Current Less than 1.35 A Voltage 14.50-14.90V
	Float	Voltage 13.50-13.80V

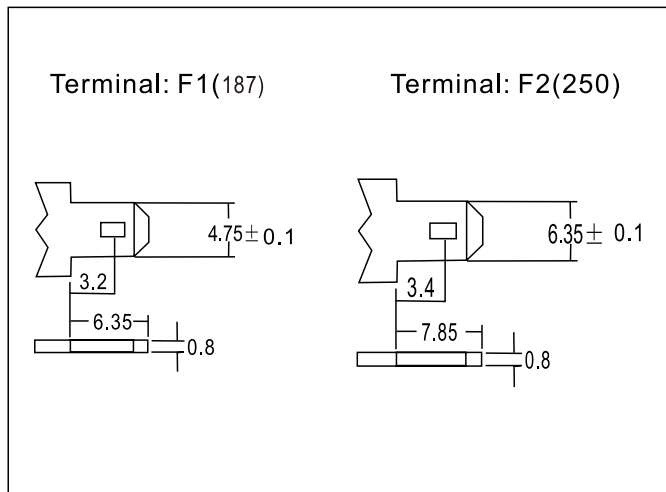
Applications

- Electric tools
- Electric toys
- Emergency lighting
- Electronic instruments
- Medical equipment
- Alarm and security systems
- Solar power systems
- Wind power systems
- Telecommunication equipments
- Uninterruptible power supplies

Outer Dimensions (mm)



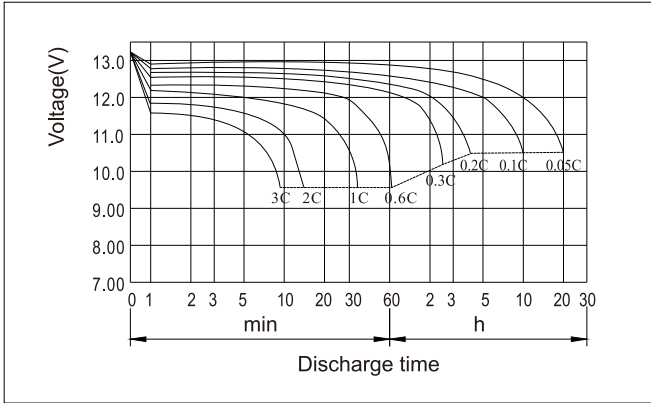
Terminal Type (mm)



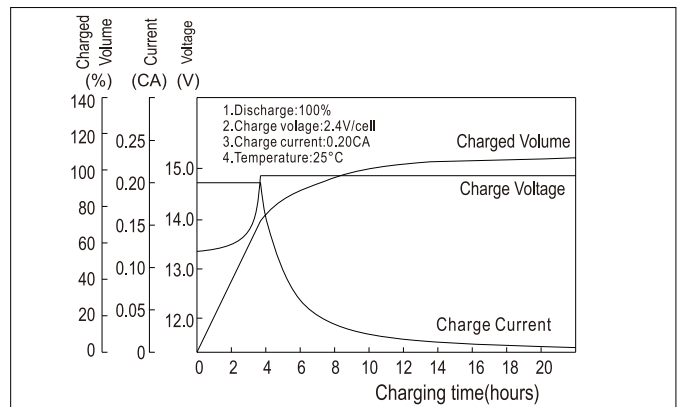
Constant Current(AMP) and Constant Power(Watt) Characteristics at 25°C(77°F)

F.V/TIME	5min	10min	15min	30min	1h	2h	3h	4h	5h	10h	20h	
9.60V	A	17.1	10.8	8.55	4.77	2.93	1.60	1.15	0.92	0.78	0.42	0.228
	w	191	122	97.5	54.7	33.9	18.7	13.6	10.9	9.32	5.10	2.74
9.90V	A	16.6	10.5	8.34	4.67	2.88	1.59	1.14	0.91	0.78	0.42	0.227
	w	185	118	95.1	53.6	33.4	18.6	13.6	10.9	9.26	5.08	2.73
10.2V	A	15.9	10.0	8.04	4.53	2.81	1.58	1.13	0.91	0.77	0.42	0.226
	w	177	113	91.6	51.9	32.5	18.4	13.5	10.8	9.20	5.05	2.72
10.5V	A	15.2	9.61	7.76	4.42	2.75	1.55	1.13	0.90	0.77	0.42	0.225
	w	170	108	88.5	50.7	31.9	18.2	13.4	10.7	9.13	5.02	2.70
10.8V	A	14.4	9.07	7.35	4.26	4.26	1.51	1.09	0.87	0.74	0.41	0.221
	w	160	102	83.8	48.8	30.9	17.7	13.0	10.4	8.86	4.92	2.65

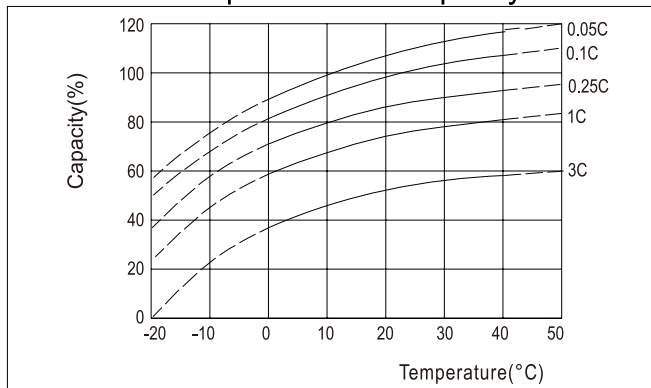
● Discharge Characteristics(25°C)



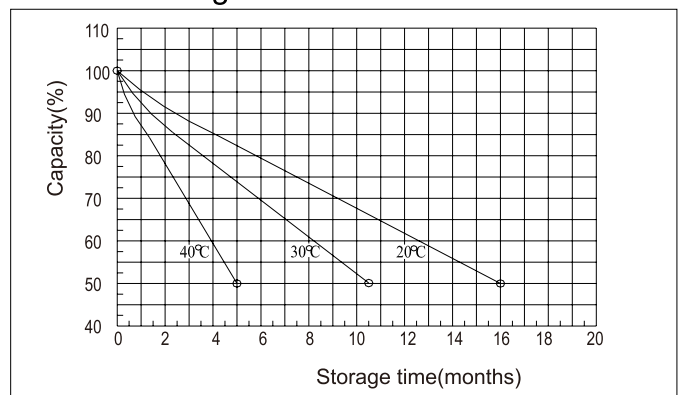
● Charging Characteristics(25°C)



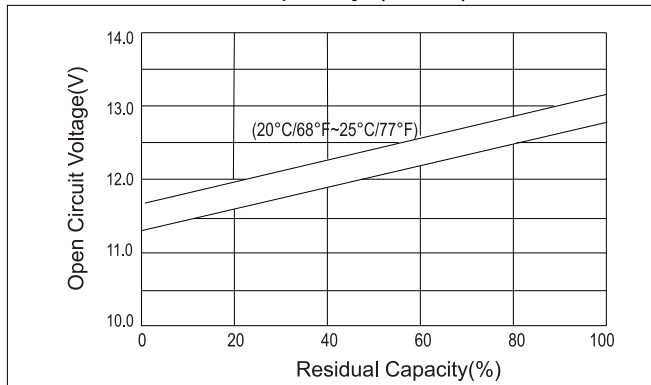
● Effect of Temperature on Capacity



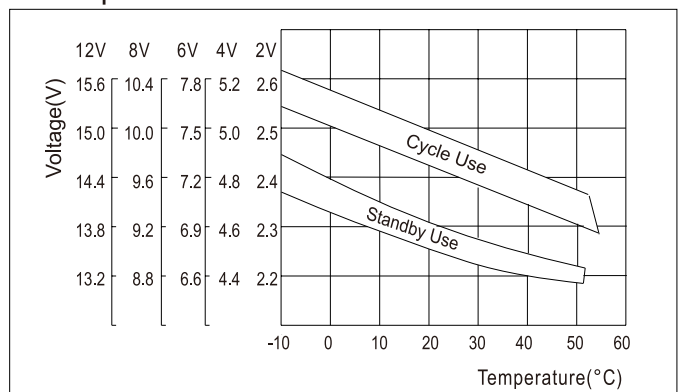
● Self-discharge Characteristics



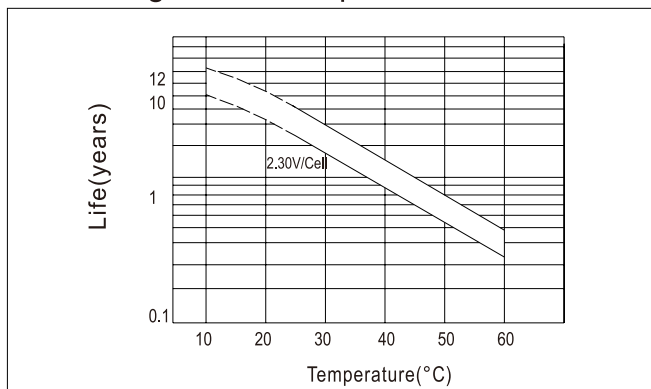
● The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



● The Relationship for Charging Voltage and Temperature



● Floating Life on Temperature



● Cycle Life on D.O.D (25°C)

