



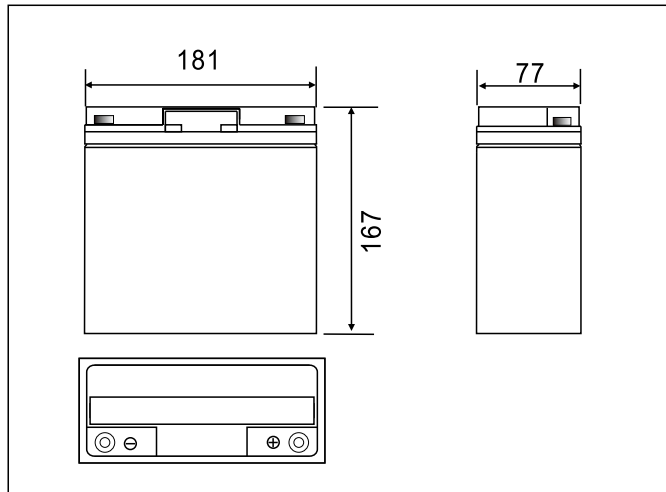
### ● Applications

- 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

### ● Specifications

Nominal Voltage		12V
Rated Capacity (20 hour rate)		20Ah
Dimensions	Total Height	167±2mm(6.57 inches)
	Height	167±2mm(6.57 inches)
	Length	181±2mm(7.13 inches)
	Width	77±2mm(3.03 inches)
Weight Approx		5.75kg(12.68 lbs)± 4%

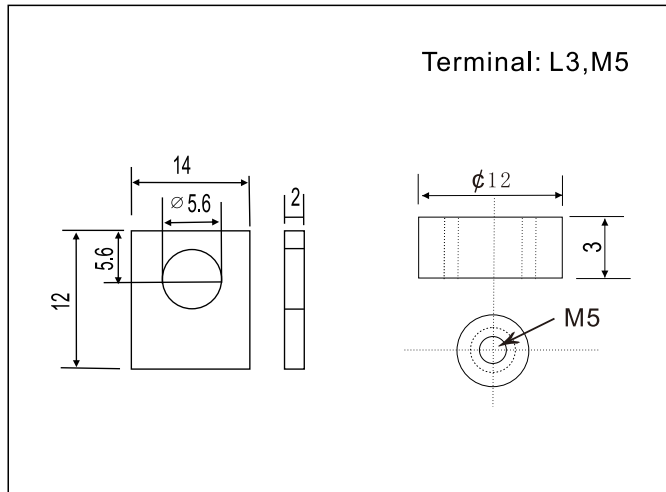
### ● Outer Dimensions (mm)



### ● Characteristics

Capacity 25°C(77°F)	20 hour rate(1.00A)	20.0 AH
	10 hour rate(1.89A)	18.9 AH
	5 hour rate(3.46A)	17.3AH
	1 hour rate(13.0 A)	13.0AH
Internal Resistance	Full charged Battery at 25°C(77°F)	12m Ω
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 6 A Voltage 14.50-14.90V
	Float	Voltage 13.50-13.80V

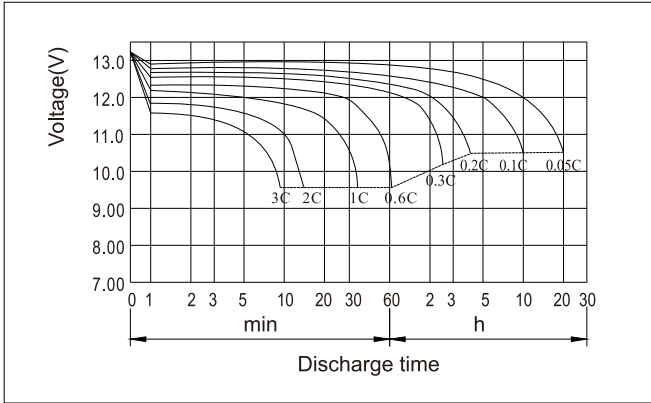
### ● Terminal Type (mm)



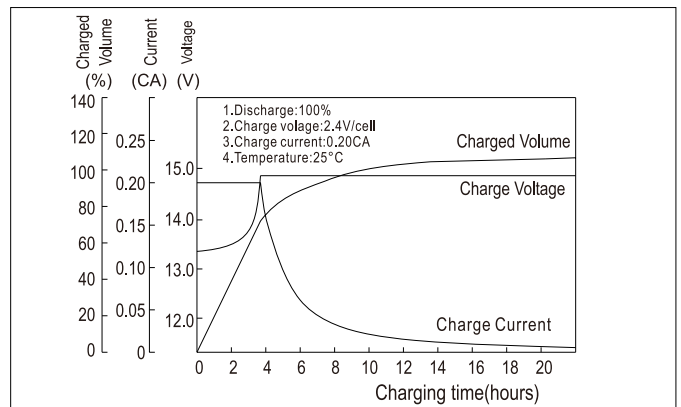
### Constant Current(AMP) and Constant Power(Watt) Characteristics at 25°C(77°F)

F.V/TIME	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	48.0	38.0	21.2	13.0	7.11	5.10	4.08	3.47	2.24	1.02
	w	541	433	243	151	83.1	60.6	48.6	41.4	26.9	12.2
9.90V	A	46.6	37.1	20.8	12.8	7.06	5.07	4.06	3.45	2.23	1.01
	w	525	423	238	148	82.6	60.2	48.3	41.2	26.8	12.1
10.2V	A	44.6	35.7	20.1	12.5	7.00	5.04	4.06	3.42	2.22	1.01
	w	504	407	231	145	81.9	59.8	48.0	40.9	26.6	12.1
10.5V	A	42.7	34.5	19.7	12.2	6.90	5.00	4.00	3.40	2.20	1.00
	w	482	393	225	142	80.7	59.4	47.6	40.6	26.4	12.0
10.8V	A	40.3	32.7	18.9	11.9	6.72	4.85	3.88	3.30	2.13	0.98
	w	455	373	217	137	78.6	57.6	46.2	39.4	25.6	11.8

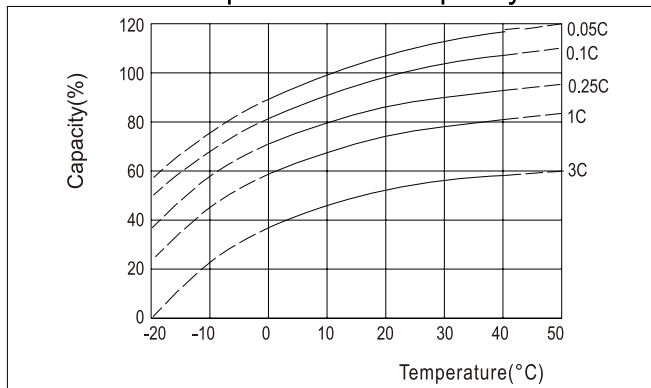
### ● Discharge Characteristics(25°C)



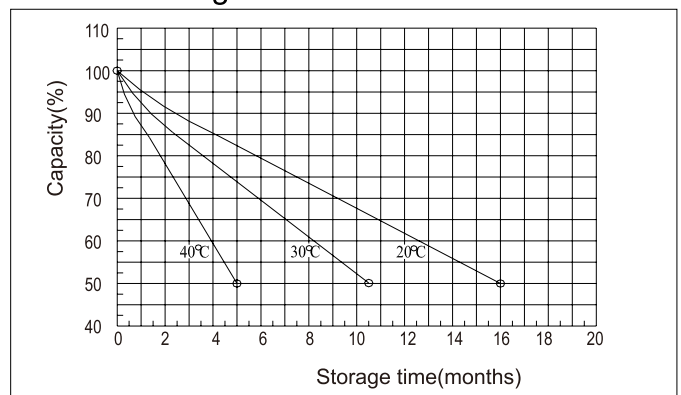
### ● Charging Characteristics(25°C)



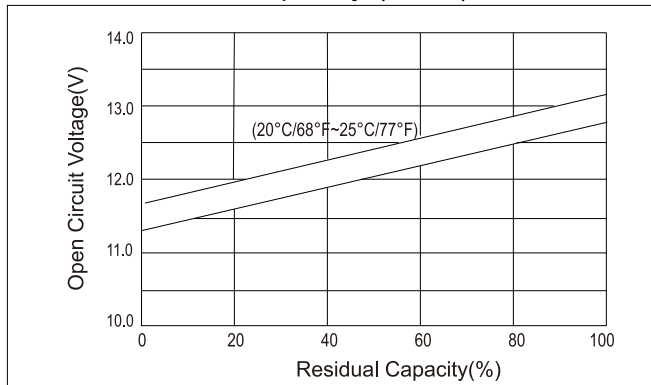
### ● Effect of Temperature on Capacity



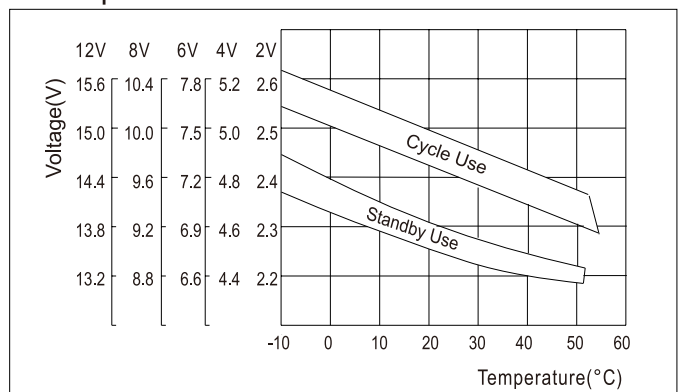
### ● Self-discharge Characteristics



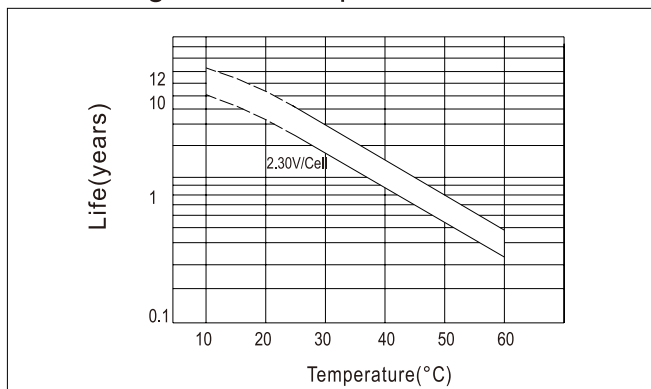
### ● The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



### ● The Relationship for Charging Voltage and Temperature



### ● Floating Life on Temperature



### ● Cycle Life on D.O.D (25°C)

