

# Sealed Lead-Acid Battery

## General Purpose

537-5472(12V3.2Ah)

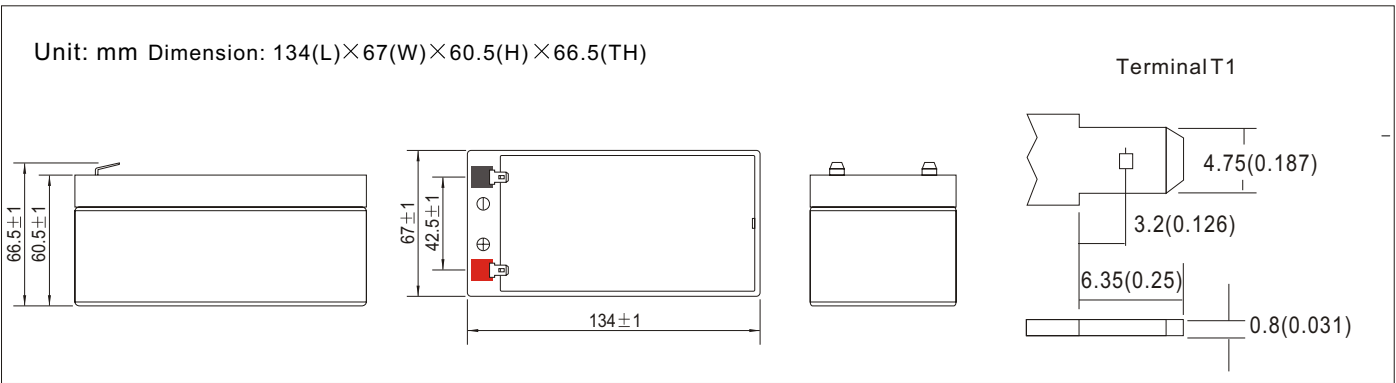
### Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	3.2Ah@20hr-rate to 1.80V per cell @25°C
Weight	Approx 1.35 kg
Max. Discharge Current	48.0 A(5 sec)
Internal Resistance	Approx 45mΩ
Operating Temp.Range	Discharge : -15~50°C (5~122°F) Charge : 0~40°C (32~104°F) Storage : -15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F )
Float charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	0.96A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C
Self Discharge	The batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	T1
Container Material	A.B.S. (UL94-HB) , Flammability resistance of UL94-V0 can be available upon request.

### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system

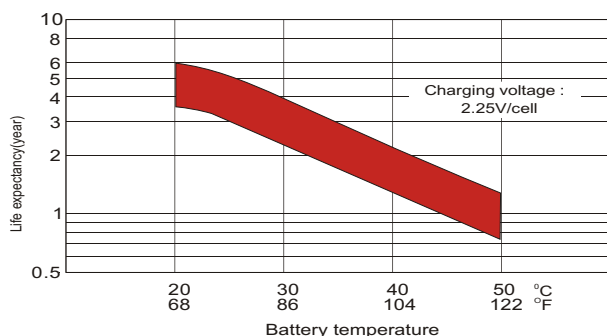
### Dimensions



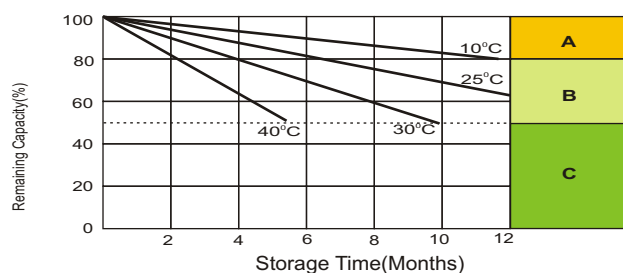
Constant Current Discharge Characteristics : A (25 °C)															Amps
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	6.14	4.28	3.53	3.06	2.46	1.89	1.55	0.944	0.719	0.591	0.502	0.435	0.345	0.287	0.158
1.80V/cell	7.55	5.11	4.10	3.47	2.72	2.06	1.66	1.00	0.756	0.622	0.524	0.454	0.358	0.298	0.160
1.75V/cell	8.95	5.78	4.52	3.77	2.91	2.19	1.75	1.05	0.783	0.641	0.538	0.465	0.368	0.303	0.162
1.70V/cell	10.2	6.37	4.89	4.05	3.05	2.27	1.82	1.09	0.809	0.657	0.551	0.476	0.374	0.308	0.164
1.65V/cell	11.2	6.85	5.17	4.25	3.18	2.36	1.90	1.12	0.829	0.670	0.563	0.485	0.380	0.313	0.167
1.60V/cell	11.8	7.14	5.39	4.39	3.27	2.41	1.94	1.16	0.849	0.687	0.575	0.495	0.388	0.318	0.168

Constant Power Discharge Characteristics : W (25 °C)															Watts
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	11.6	8.16	6.79	5.93	4.79	3.71	3.04	1.87	1.43	1.18	1.00	0.872	0.695	0.579	0.320
1.80V/cell	14.1	9.64	7.81	6.66	5.27	4.01	3.26	1.98	1.49	1.23	1.04	0.905	0.716	0.596	0.322
1.75V/cell	16.5	10.8	8.53	7.20	5.59	4.24	3.41	2.05	1.54	1.26	1.06	0.921	0.731	0.604	0.322
1.70V/cell	18.5	11.8	9.15	7.67	5.83	4.38	3.53	2.12	1.58	1.29	1.08	0.938	0.738	0.610	0.326
1.65V/cell	20.1	12.5	9.56	7.97	6.03	4.52	3.66	2.17	1.61	1.31	1.10	0.952	0.746	0.616	0.329
1.60V/cell	20.8	12.9	9.86	8.13	6.13	4.58	3.71	2.22	1.64	1.33	1.12	0.966	0.758	0.623	0.330

## Effect of Temperature on Long Term Float Life



## Self Discharge Characteristics

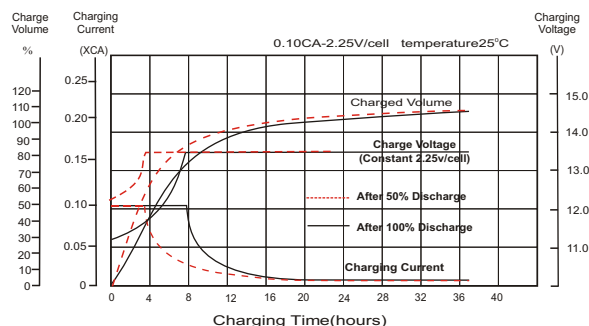


**A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)

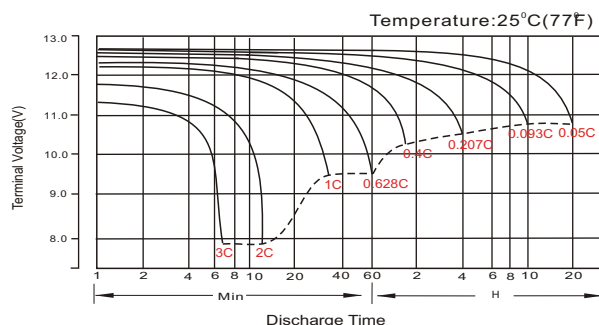
**B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8~10 hours at limited current 0.05CA.

**C** Avoid this storage period unless regular Top charge.  
Supplementary charge may often fail to recover the full capacity

## Float Charging Characteristics



## Discharge Characteristics



## Available Capacity Subject to Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%

## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.80V	1.75V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

**Charge the batteries at least once every six months, if they are stored at 25°C.**

## Charging Method:

Constant Voltage	-0.2Cx2h+2.4~2.45V/Cellx24h, Max. Current 0.3CA
Constant Current	0.1C until the voltage reaching 14.4V, then 0.1Cx4h



## Maintenance & Cautions

### Float Service:

◆ It is recommended to check battery/Float voltage each month.

### Equalisation charge:

◆ Equalisation charging is recommended once every 3 to 6 months using.

◆ Discharge 100% rated capacity.

◆ Charge 2.35v/cell constant voltage, maximum 0.3CA 24hrs.

### Cyclic Service:

◆ Temperature compensation for varying temperatures:

- Charge voltage -3mV/Cell/degC from 25degC norm.

◆ The service life of your battery will be affected by:

- The number of discharge cycles, depth of discharge, ambient temperature and charging voltage.