

# Datasheet

## Sealed Lead-Acid Battery

### General Purpose Specification

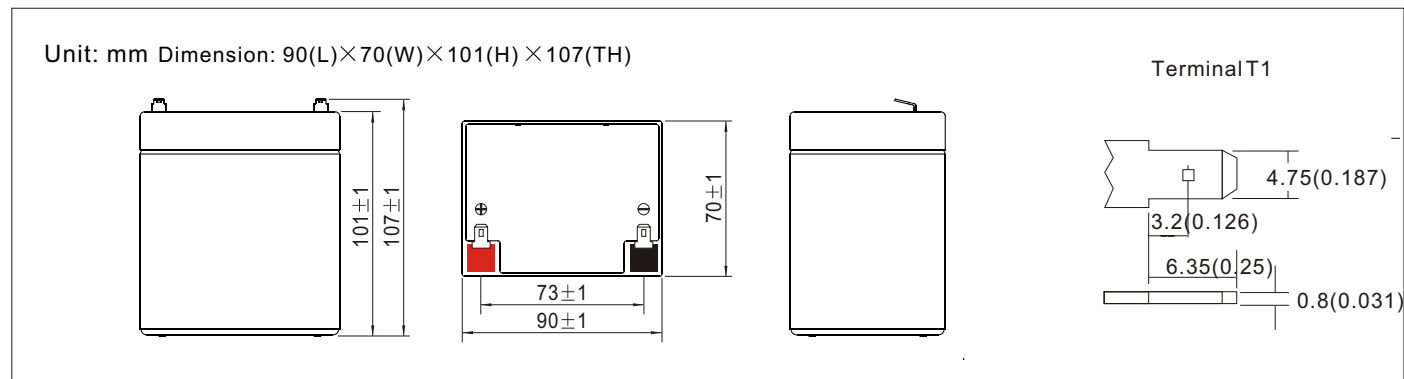
**686-7253(12V5.0Ah)**

Cells Per Unit	6
Voltage Per Unit	12
Capacity	5.0Ah@20hr-rate to 1.80V per cell @25°C
Weight	Approx 1.68 kg
Max. Discharge Current	75A (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	1.5A
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	Faston Tab 187(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



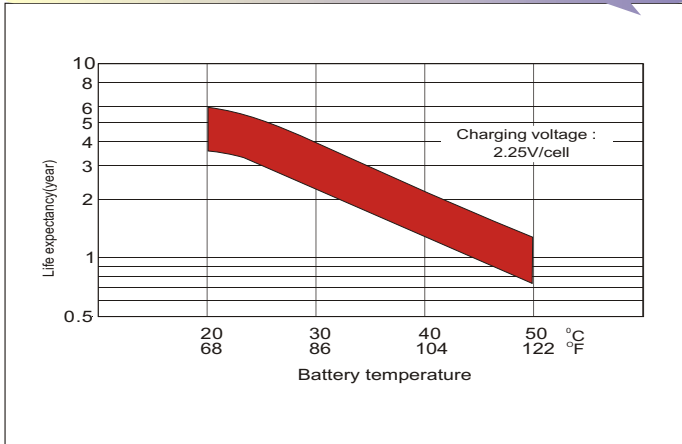
### Constant Current Discharge Characteristics : A (25°C)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
11.1V	9.52	6.33	5.22	4.59	3.76	2.93	2.43	1.49	1.12	0.924	0.784	0.679	0.540	0.451	0.248
10.8V	11.4	7.59	6.14	5.25	4.20	3.22	2.63	1.60	1.20	0.98	0.824	0.709	0.560	0.465	0.250
10.5V	13.7	8.70	6.82	5.81	4.50	3.45	2.78	1.67	1.24	1.01	0.847	0.729	0.575	0.477	0.253
10.2V	15.9	9.72	7.52	6.29	4.80	3.61	2.90	1.73	1.27	1.03	0.866	0.745	0.584	0.484	0.257
9.9V	17.5	10.5	8.06	6.74	5.05	3.77	3.00	1.78	1.31	1.06	0.885	0.759	0.593	0.490	0.261
9.6V	19.3	11.4	8.66	7.11	5.32	3.93	3.12	1.83	1.34	1.08	0.904	0.777	0.606	0.499	0.262

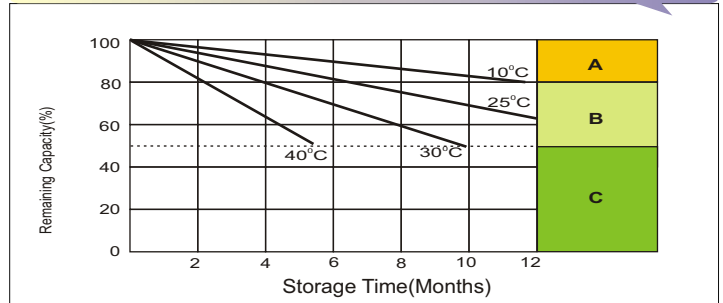
### Constant Power Discharge Characteristics : W (25°C)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
11.1V	106.6	71.1	58.9	51.9	42.9	33.8	28.2	17.4	13.1	10.8	9.22	8.01	6.39	5.36	2.94
10.8V	123.7	83.4	68.1	58.9	47.6	36.8	30.3	18.5	14.0	11.5	9.65	8.33	6.61	5.51	2.97
10.5V	147.0	94.7	75.0	64.6	50.5	39.2	31.9	19.2	14.4	11.7	9.88	8.54	6.78	5.64	2.99
10.2V	168.2	104.3	81.9	69.4	53.6	40.8	33.1	19.8	14.7	12.0	10.1	8.71	6.87	5.73	3.04
9.9V	182.8	111.4	86.7	73.6	56.0	42.4	34.1	20.4	15.0	12.2	10.3	8.85	6.96	5.79	3.08
9.6V	197.9	118.8	91.5	76.5	58.2	43.7	35.2	20.8	15.3	12.5	10.5	9.03	7.10	5.88	3.10

**Effect of Temperature on Long Term Float Life**

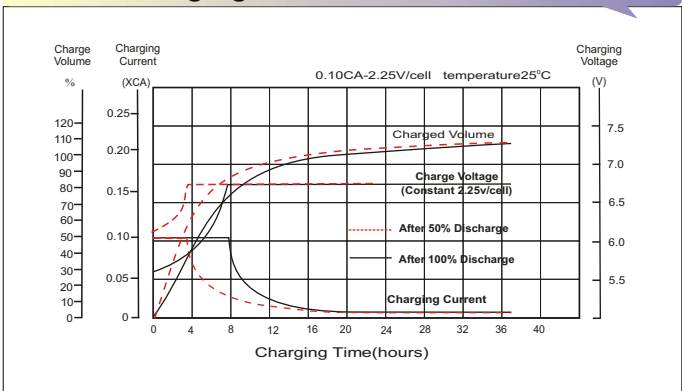


**Self Discharge Characteristics**

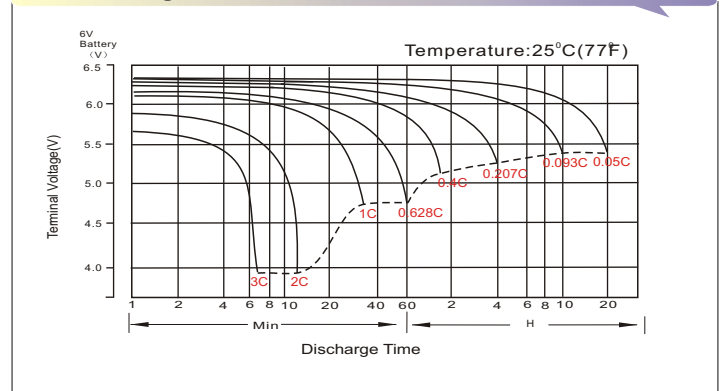


- A** No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)  
Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- B** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

**Float Charging Characteristics**



**Discharge Characteristics**



**Capacity Factors With Different 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	-0.2Cx2h+0.1CAx 12h
Fast	-0.2Cx2h+0.3CAx4.0h

**Maintenance & Cautions**

Float Service:
◆ very month, recommend inspection every battery voltage.
◆ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 100% rate capacity discharge.
Charge: Max. current 0.3CA, constant voltage 2.35V/Cell charge 24h.
◆ Effect of temperature on float charge voltage: -3mV/°C/Cell.
◆ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.