

**General Series Battery**

General series batteries are designed with AGM (Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for common power backup system. MS Series Batteries are the general purpose batteries with 5 years floating design life at 25°C Meet with IEC, BS, JIS and Eurobat standard, UL(MH62092), CE approved.

**Application**

- Emergency Power System
- Communication equipment
- Telecommunication systems
- Uninterruptible power supplies
- Electric toy car and wheelchairs, etc
- Power tools
- Alarm system
- Marine equipment
- Medical equipment
- Fire and Security System



**General Features**

- Heavy Duty Grid
- Non-spillable construction
- Mechanized assembly
- High Reliability and Stability
- Sealed and Maintenance-free
- Long Life and low self-discharge design

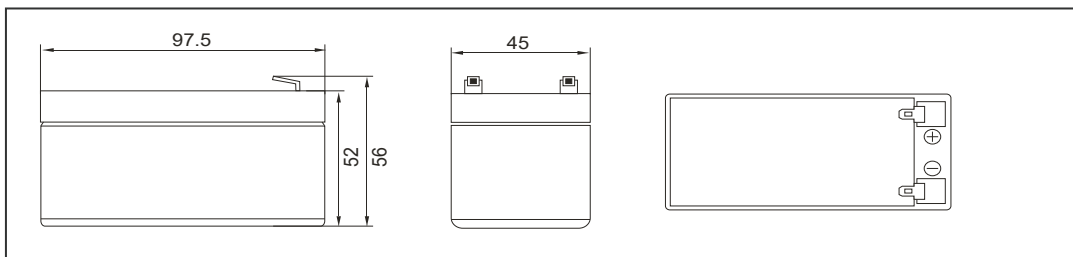
**Construction**

- Positive ..... Lead dioxide
- Electrolyte ..... Silicon dioxide
- Separator ..... Fiber glass
- Container ..... ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)
- Negative ..... Lead
- Safety Valve ..... EPDR
- Terminal ..... Copper

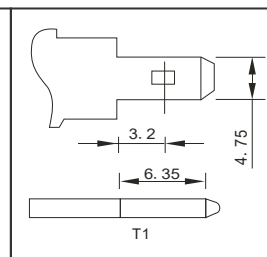
**Specification**

Battery Model	Nominal Voltage		12V	
	Rated Capacity (10 Hours Rate)		1.3Ah	
	Cells Per Battery		3	
Dimension	Length	Width	Height	Total Height
	97.5mm (3.83 inches)	45mm (1.77 inches)	52mm (2.04 inches)	56mm (2.20 inches)
Approx. Weight	0.56kg			
Capacity @ 25°C (77°F)	20 hour rate(0.065A,10.5V)	10 hour rate(0.11A,10.8V)	5 hour rate(0.22A,10.5V)	1 hour rate(0.713A,9.6V)
	1.30Ah	1.10Ah	1.10Ah	0.713Ah
Max. Discharge Current	19.5A (5 Sec.)			
Internal Resistance	Full charge at 25°C (77°F): Approx. 110mΩ			
Capacity affected by Temp. (10HR)	40°C (104°F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)
	102%	100%	85%	65%
Self Discharge @ 25°C (77°F)	After 3 months storage		After 6 months storage	After 12 months storage
	91%		82%	64%
Charge Method @ 25°C (77°F)	Cycle Use		Float Use	
	14.4-14.7V (Initial charging current less than 0.39A)		13.50-13.80V	

**Outer Dimension (mm)**



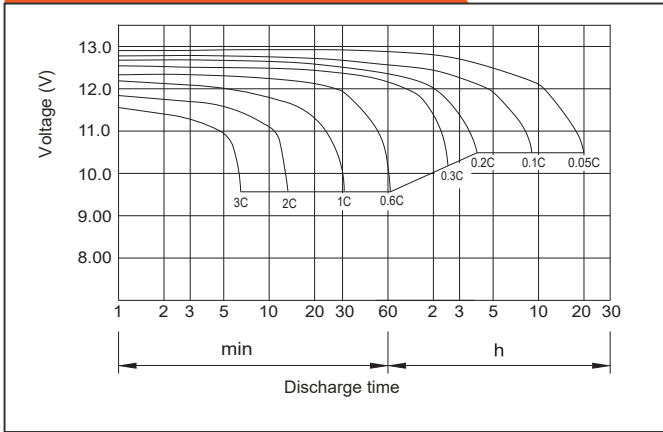
**Terminal Type**



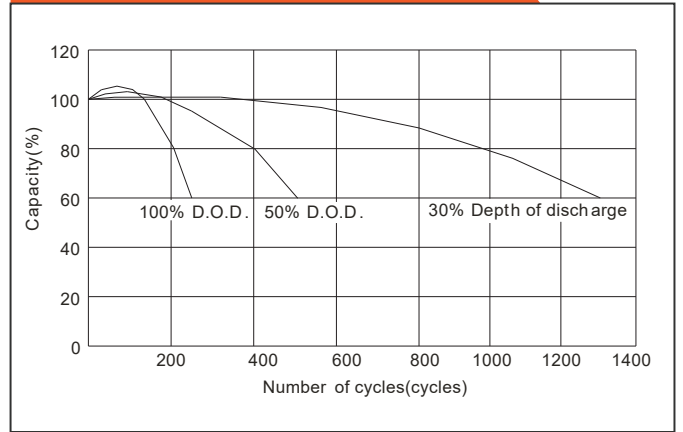
**Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)**

F.V/Time	15min	30min	60min	90min	2h	3h	5h	8h	10h	20h
1.60V	2.145	1.352	0.713	0.522	0.463	0.330	0.225	0.154	0.125	0.071
	4.140	2.693	1.423	1.042	0.926	0.659	0.450	0.308	0.251	0.143
1.67V	2.034	1.323	0.708	0.517	0.460	0.328	0.224	0.153	0.124	0.068
	3.928	2.637	1.413	1.032	0.922	0.657	0.448	0.306	0.248	0.136
1.70V	1.983	1.312	0.703	0.516	0.459	0.327	0.224	0.151	0.122	0.066
	3.834	2.614	1.404	1.032	0.920	0.656	0.448	0.303	0.245	0.132
1.75V	1.900	1.288	0.693	0.510	0.456	0.325	0.222	0.151	0.121	0.065
	3.676	2.570	1.387	1.019	0.914	0.652	0.446	0.303	0.243	0.130
1.80V	1.822	1.260	0.687	0.506	0.454	0.323	0.222	0.150	0.119	0.063
	3.531	2.513	1.378	1.014	0.909	0.649	0.445	0.300	0.239	0.126
1.85V	1.727	1.225	0.677	0.500	0.449	0.320	0.221	0.148	0.117	0.061
	3.351	2.446	1.360	1.006	0.901	0.644	0.443	0.297	0.235	0.122

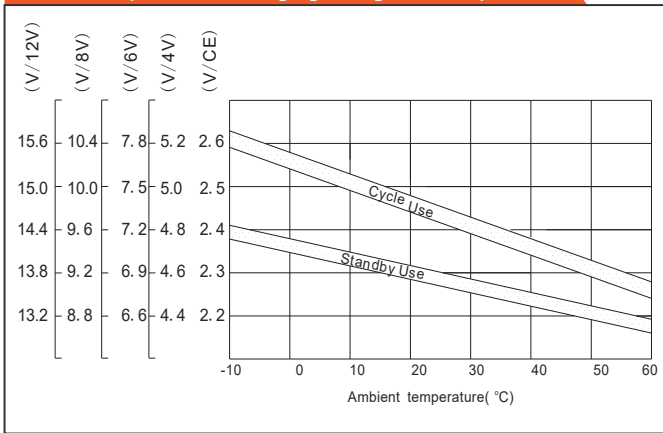
Discharge characteristic curve (25°C/77°F)



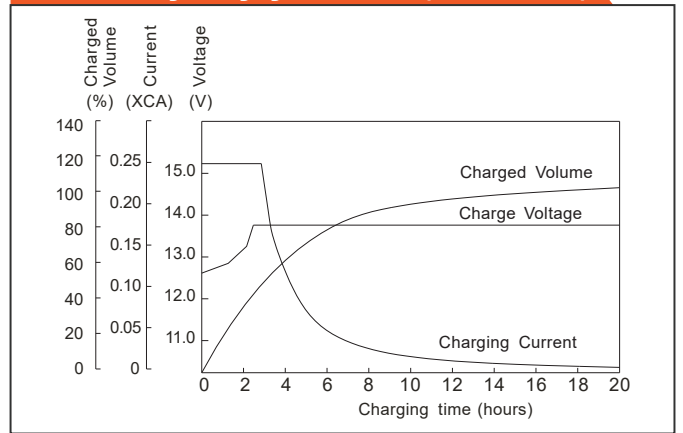
Cycle service life in relation to depth of discharge



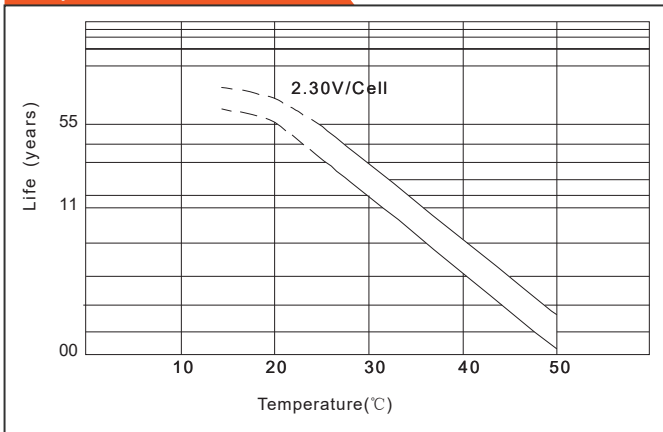
Relationship between charging voltage and temperature



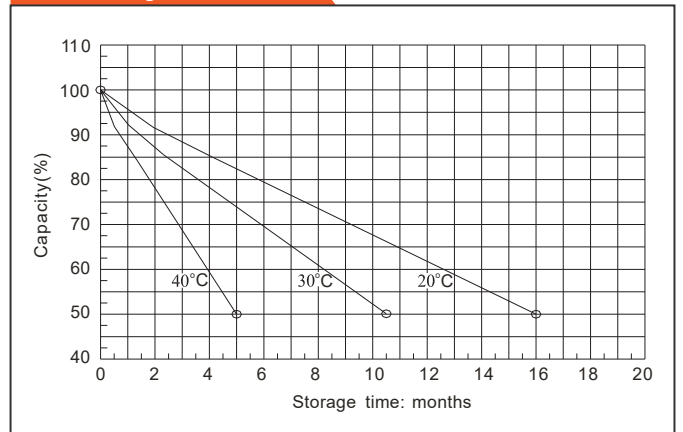
Constant voltage charging characteristic (0.25CA, at 25°C)



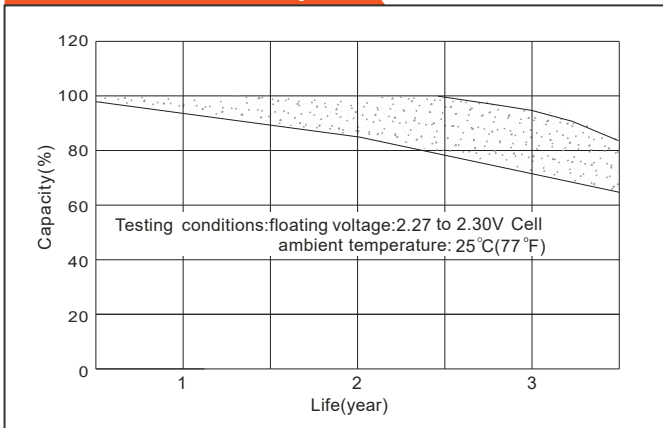
Temperature effects on float life



Self-discharge characteristic



Life characteristics of standby use



Charge characteristic curve for standby use

