

General Series battery

General (GP) Series VRLA batteries are designed with AGM (Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for common power backup system. GP 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
- * Mechanized assembly
- * Non-spillable construction
- * High Reliability and Stability
- * Sealed and Maintenance-free
- * Long Life and low self-discharge design

Construction

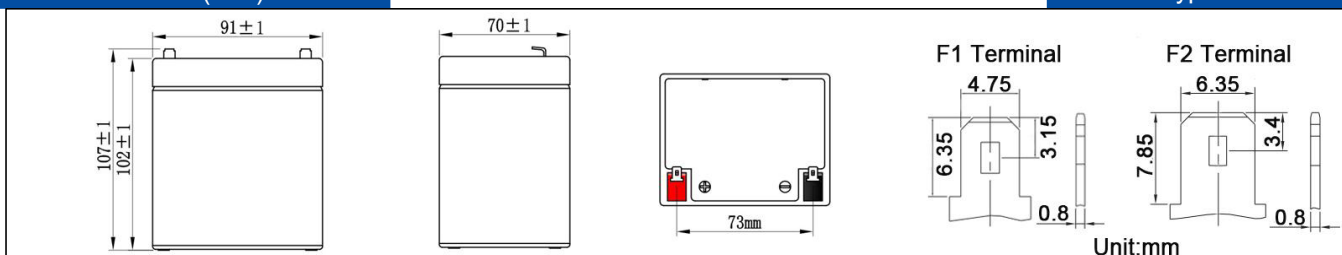
- * Positive Lead dioxide
- * Electrolyte Sulfuric acid
- * Separator Fiber glass
- * Container ABS(UL94-HB)/Flame Retardant ABS (UL94-V0)
- * Negative Lead
- * Safety Valve EPDM
- * Terminal Copper



Specification

Battery Model	Nominal Voltage		12V (6 cells per unit)	
	Rated capacity (20 Hour rate)		4.0Ah	
Dimension	Length	Width	Height	Total Height
	91mm (3.58 inches)	70mm (2.75 inches)	102mm (4.01 inches)	107mm (4.21 inches)
Approx Weight	1.25kg(2.75 lbs) ± 3%			
Internal Resistance	Full charged at 25°C(77°F):Approx 56.7(mΩ/25°C ± 15%)			
Maximum Charge Current	1.20A			
Max.discharge current	60.0A (5Sec.)			
Short-circuit current	140A			
Operating Temperature Range	Nominal Operating Temperature	Discharge	Charge	Storage
	25°C(77°F)	-15°C~ 50°C(5°F~122°F)	-15°C~ 40°C(5°F~104°F)	-15°C~ 40°C(5°F~104°F)
Capacity @ 25°C (77°F)	20 hour rate(0.206A,10.5V)	10 hour rate(0.386A,10.5V)	3 hour rate(1.026A,10.2V)	1 hour rate(2.59A,9.6V)
	4.12Ah	3.86Ah	3.08Ah	2.59Ah
Capacity affected by Temp.(20HR)	40°C (104°F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)
	102%	100%	85%	65%
Charge method at 25°C(77°F)	Float Charging Voltage	Equalization Charging Voltage	Cycle Use Voltage	
	13.5~13.8 VDC (-3mV/cell/°C)	14.1~14.4 VDC (-4mV/cell/°C)	14.4~15.0 VDC (-5mV/cell/°C)	

Outer dimension (mm)

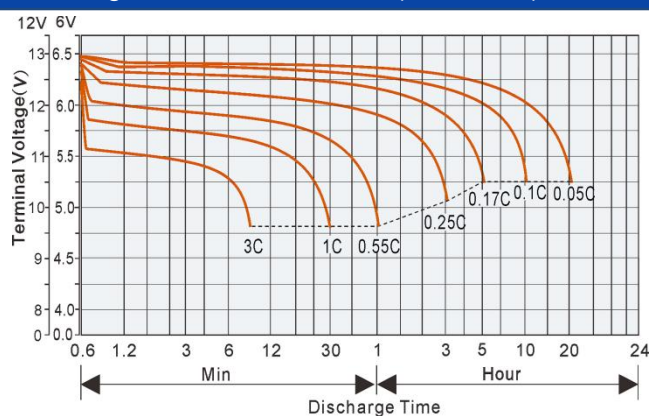


Terminal Type

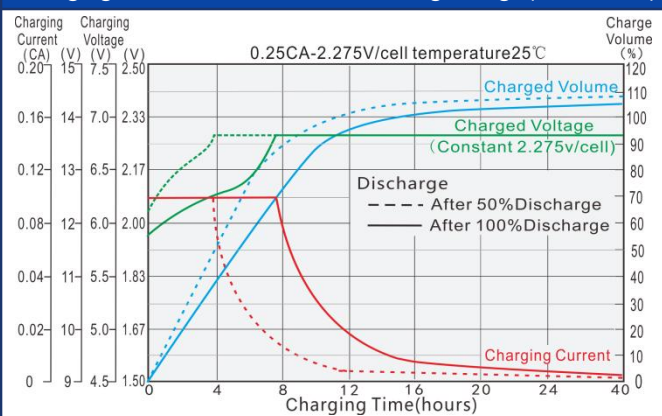
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

F.V/Time		5min	10min	15min	20min	30min	1h	1.5h	2h	3h	5h	8h	10h	20h
1.85V/cell	A	12.10	7.85	6.25	5.27	3.92	2.365	1.720	1.360	0.970	0.645	0.447	0.369	0.196
	W	22.94	15.12	12.16	10.31	7.71	4.691	3.420	2.709	1.937	1.291	0.897	0.742	0.396
1.80V/cell	A	12.80	8.22	6.47	5.43	4.03	2.422	1.759	1.390	0.990	0.660	0.459	0.378	0.201
	W	23.95	15.71	12.50	10.56	7.89	4.791	3.489	2.761	1.971	1.317	0.919	0.758	0.405
1.75V/cell	A	13.48	8.56	6.69	5.59	4.14	2.475	1.794	1.417	1.009	0.674	0.469	0.386	0.206
	W	24.90	16.22	12.84	10.82	8.07	4.883	3.550	2.808	2.005	1.343	0.937	0.773	0.414
1.70V/cell	A	14.15	8.89	6.90	5.74	4.24	2.526	1.827	1.441	1.026	0.686	0.477	0.393	0.210
	W	25.81	16.71	13.16	11.05	8.23	4.972	3.606	2.849	2.034	1.364	0.952	0.786	0.422
1.67V/cell	A	14.48	9.05	7.00	5.81	4.29	2.548	1.844	1.453	1.034	0.691	0.480	0.396	0.212
	W	26.25	16.95	13.31	11.16	8.31	5.009	3.636	2.870	2.048	1.373	0.957	0.791	0.425
1.60V/cell	A	15.10	9.35	7.20	5.95	4.38	2.590	1.870	1.470	1.050	0.700	0.485	0.400	0.215
	W	27.08	17.38	13.61	11.37	8.46	5.082	3.680	2.899	2.077	1.389	0.966	0.798	0.431

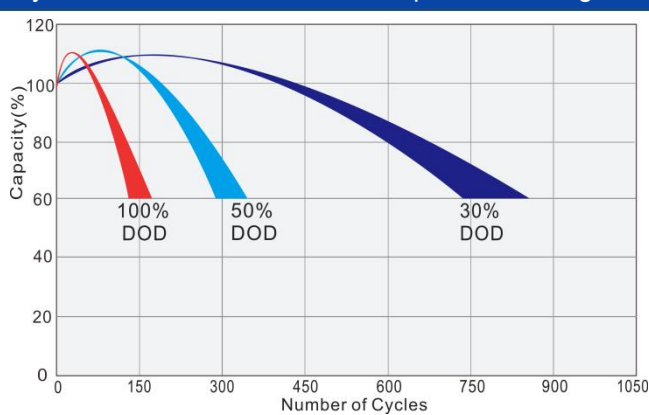
Discharge characteristic curve (25°C/77°F)



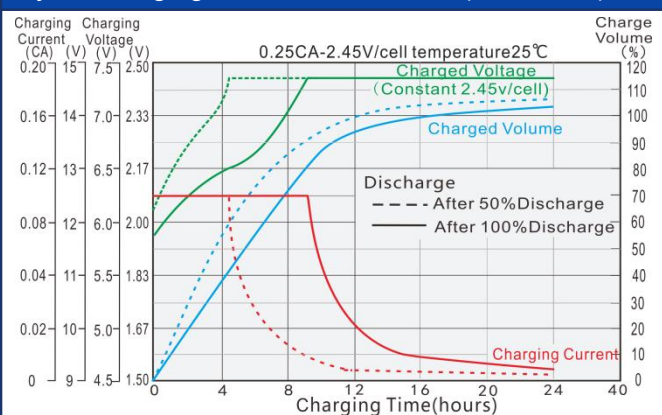
Charging characteristic curve of floating charge (25°C/77°F)



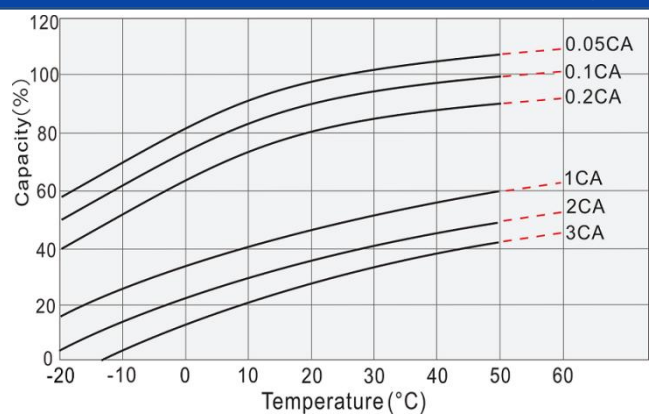
Cycle service life in relation to depth of discharge



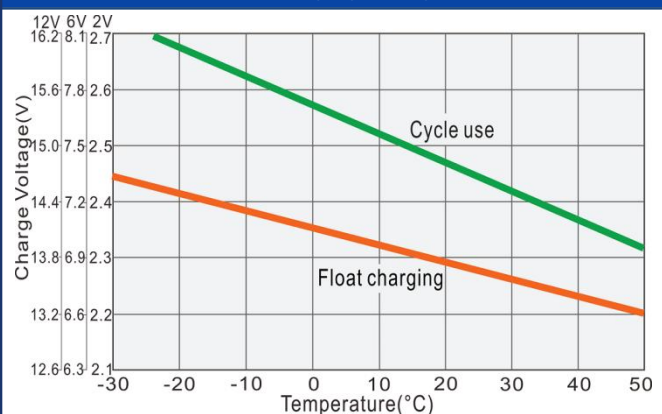
Cyclic charging characteristic curve (25°C/77°F)



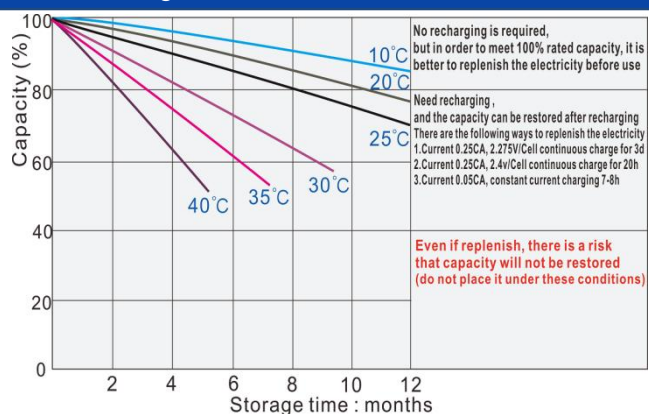
Relationship between temperature and capacity



Relationship between charging voltage and temperature



Self discharge characteristics



Temperature vs Float Life

