

High Rate Series Battery

High Rate Series VRLA batteries are designed with low internal resistance AGM (Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for High rate UPS and power backup system. High rate series Batteries are the special design batteries with 12 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
- * Power tools
- * Alarm system
- * Security system
- * Fire and Security System

General Features

- * Safety Sealing
- * Non-spillable construction
- * High Reliability and Stability
- * Sealed and Maintenance-free
- * Long Life and low self-discharge design
- * 30% increased power output at 15M backup time.

Construction

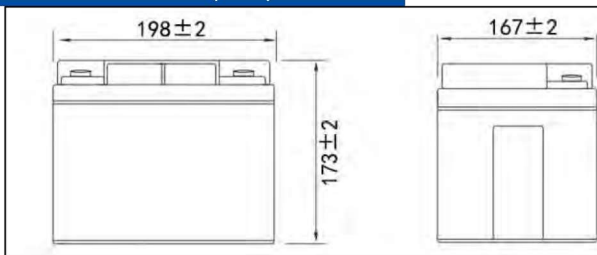
- * Positive ····· Lead dioxide
- * Electrolyte ··· Sulfuric acid
- * Separator ··· Fiber glass
- * Container ··· ABS(UL94-HB)/Flame Retardant ABS (UL94-V0)
- * Negative ····· Lead
- * Safety Valve ··· EPDR
- * Terminal ····· Copper



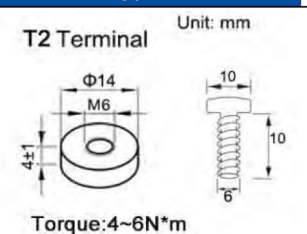
Specification

Battery Model	Nominal Voltage		12V (6 cells per unit)	
	Rated capacity (10 Hour rate)		40Ah	
Dimension	Length	Width	Height	Total Height
	198mm (7.79 inches)	167mm (6.57 inches)	173mm (6.81 inches)	173mm (6.81 inches)
Approx Weight	12.40kg(27.34 lbs) ± 3%			
Internal Resistance	Full charged at 25°C(77°F): Approx 6.80mΩ			
Maximum Charge Current	12.6A			
Max. discharge current	504A (5Sec.)			
Short-circuit current	980A			
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(2.28A, 10.8V)	10 hour rate(4.26A, 10.8V)	5 hour rate(7.98A, 10.8V)	1 hour rate(30.5A, 9.6V)
	45.6Ah	42.6Ah	39.9Ah	30.5Ah
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%
Charge method	Float Charging Voltage		Equalization Charging Voltage	
	13.5 ~ 13.8 VDC/Unit at 25°C (77°F)		14.4 ~ 15.0 VDC/Unit at 25°C (77°F)	

Outer dimension (mm)



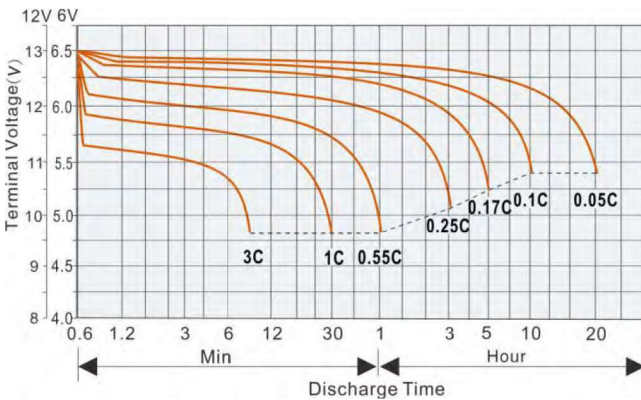
Terminal Type



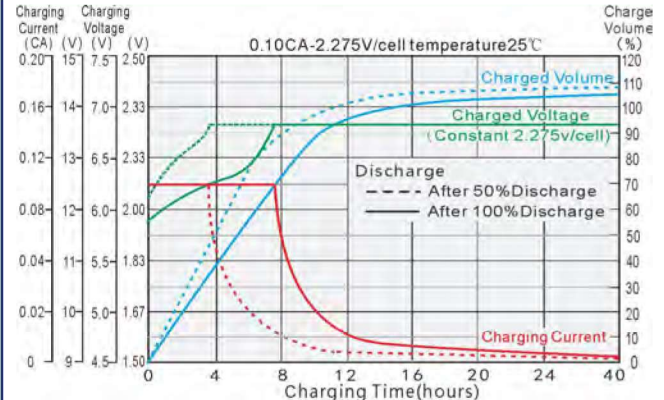
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

F.V/Time		5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	A	118	91	73.5	61.0	44.5	25.80	16.30	11.70	7.80	5.45	4.18	2.23
	W	228	177	144	120	87.5	51.02	32.36	23.30	15.59	10.96	8.43	4.48
1.80V/cell	A	132	98	77.7	64.3	46.5	26.90	16.77	12.12	7.98	5.54	4.26	2.28
	W	254	189	150	126	91.0	52.83	33.07	24.02	15.88	11.09	8.55	4.56
1.75V/cell	A	145	105	81.8	67.5	48.7	27.98	17.22	12.52	8.15	5.62	4.33	2.32
	W	276	201	157	131	94.7	54.51	33.75	24.66	16.14	11.19	8.65	4.63
1.70V/cell	A	157	111	85.8	70.6	50.8	29.05	17.65	12.90	8.31	5.69	4.39	2.35
	W	294	210	163	136	97.8	56.07	34.27	25.18	16.35	11.26	8.71	4.67
1.67V/cell	A	164	114	87.8	72.2	52.0	29.54	17.87	13.08	8.38	5.71	4.41	2.36
	W	306	214	165	137	99.2	56.64	34.47	25.36	16.37	11.22	8.70	4.69
1.60V/cell	A	177	122	92.5	75.2	54.0	30.50	18.25	13.40	8.50	5.75	4.45	2.37
	W	317	222	170	140	101.0	58.06	34.95	25.79	16.49	11.22	8.74	4.71

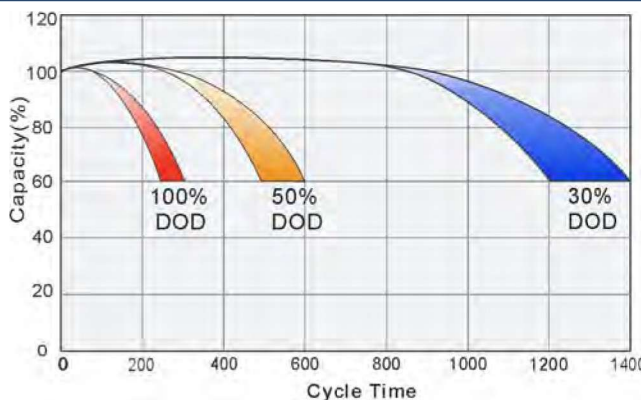
Discharge characteristic curve (25°C/77°F)



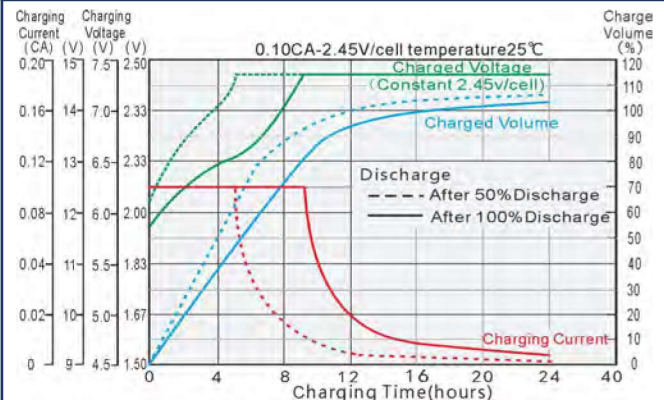
Charging characteristic curve of floating charge (25°C/77°F)



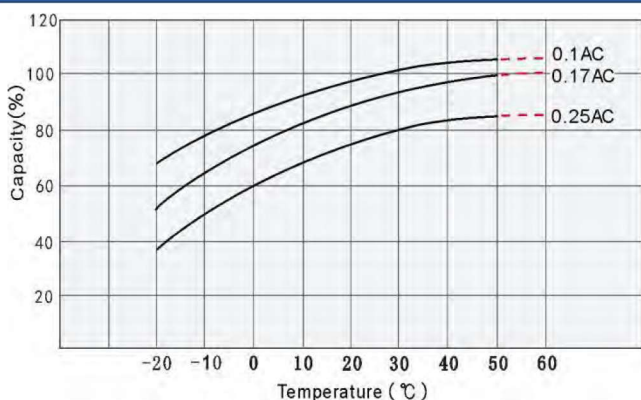
Cycle service life in relation to depth of discharge



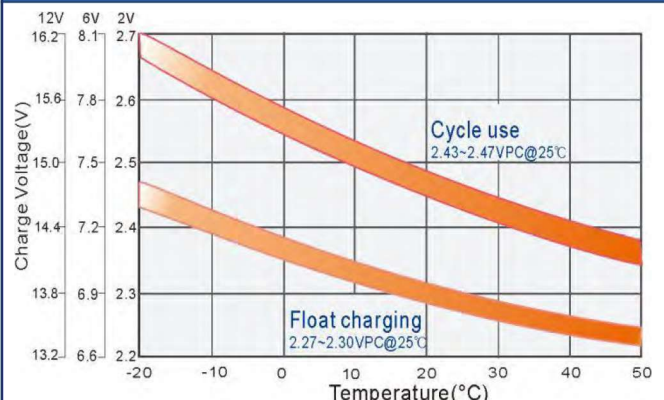
Cyclic charging characteristic curve (25°C/77°F)



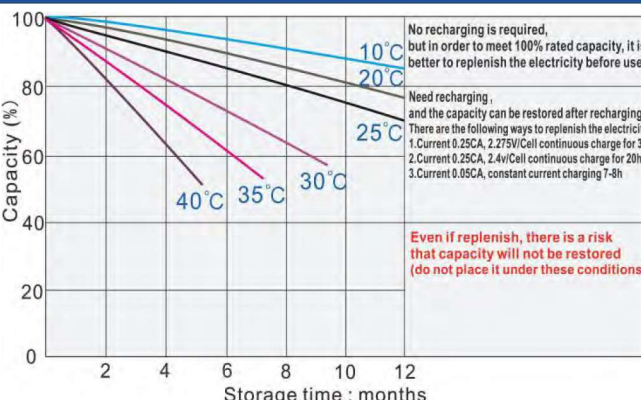
Relationship between temperature and capacity



Relationship between charging voltage and temperature



Self discharge characteristics



Temperature vs Float Life

