

## GEL Series Battery

GE series valve regulated lead-acid batteries adopt continuous rolling and stamping grid structure, AGM diaphragm and GEL electrolyte technology, Electrolytes don't undergo stratification, Reduce plate grid corrosion rate, effectively extending the battery's service life. GE series Batteries are designed for 12 years life time floating design life at 25°C. Meet with IEC, BS, JIS and Eurobat standard.

## Application

- \* Emergency Power System
- \* Communication equipment
- \* Telecommunication systems
- \* Uninterruptible power supplies
- \* Electric toy car and wheelchairs, etc.
- \* Generator, Power tools
- \* Golf cars and buggies
- \* Marine equipment
- \* Medical equipment
- \* Solar and wind power system

## General Features

- \* Safety Sealing
- \* Non-spillable construction
- \* High power density
- \* Excellent recovery from Deep discharge
- \* Thick plates and high active materials
- \* Longer Life and low self-discharge design

## Construction

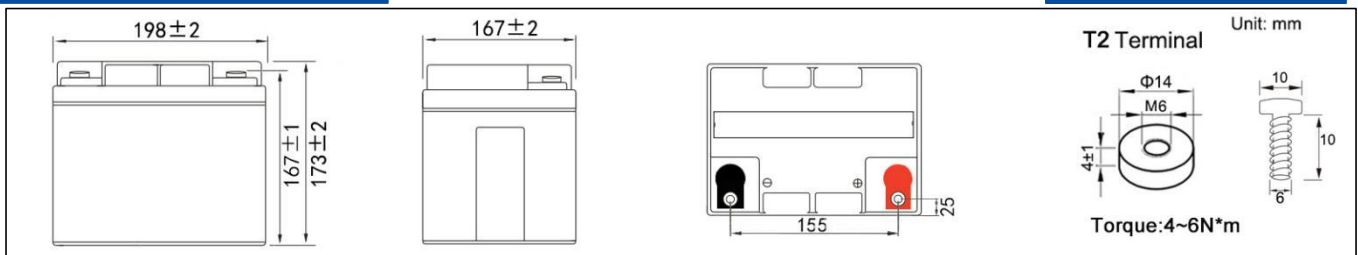
- \* Positive.....Lead dioxide
- \* Electrolyte...Sulfuric acid
- \* Separator....Fiber glass
- \* Container....ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)
- \* Negative.....Lead
- \* Safety Valve....EPDM
- \* Terminal.....Copper



## Specification

Battery Model	Nominal Voltage		12V (6 cells per unit)	
	Rated capacity (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	11.7kg(25.79 lbs) ± 3%			
Internal Resistance	Full charged at 25°C(77°F): Approx 8.58mΩ			
Maximum Charge Current	12.0A			
Max. discharge current	480A (5Sec.)			
Short-circuit current	840A			
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)	10 hour rate(4.00A, 10.8V)	5 hour rate(7.04A, 10.5V)	3 hour rate(10.73A, 10.2V)	1 hour rate(26.75A, 9.6V)
	40.00Ah	35.20Ah	32.19Ah	26.75Ah
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 at 25°C(77°F)	Float Charging Voltage		Equalization Charging Voltage	
	13.5~13.8 VDC (-3mV/cell/°C)		14.1~14.4 VDC (-4mV/cell/°C)	
			Cycle Use Voltage	
			14.4~15.0 VDC (-5mV/cell/°C)	

## Outer dimension (mm)

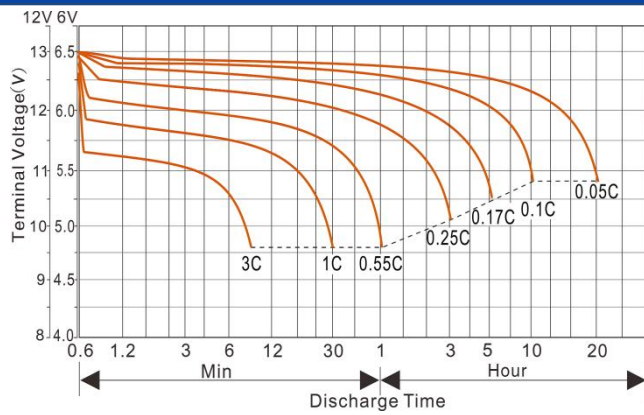


## Terminal Type

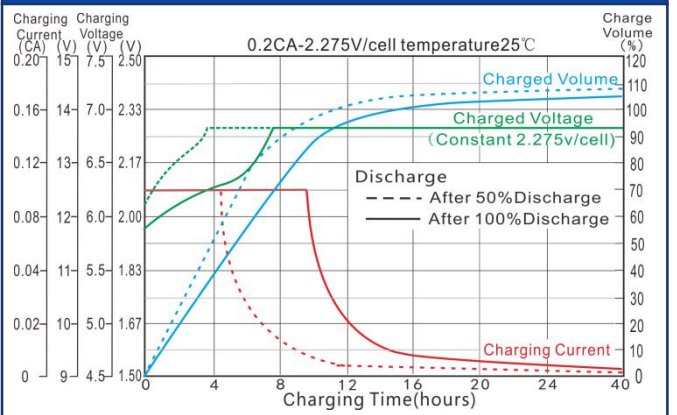
## Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)

F.V/Time		5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	A	90.0	71.0	58.9	49.7	38.3	23.91	13.79	10.10	6.79	4.72	3.93	2.102
	W	170	135	112.9	96.1	74.8	47.33	27.50	20.20	13.62	9.49	7.92	4.240
1.80V/cell	A	101	76.1	62.1	52.1	40.0	24.67	14.12	10.33	6.92	4.80	4.00	2.140
	W	188	143	118.7	100.1	77.6	48.61	28.05	20.58	13.84	9.63	8.04	4.310
1.75V/cell	A	112	80.8	65.2	54.3	41.4	25.34	14.42	10.53	7.04	4.87	4.04	2.161
	W	205	151	123.5	103.6	80.0	49.69	28.57	20.95	14.05	9.75	8.10	4.350
1.70V/cell	A	123	85.2	68.1	56.5	42.7	25.97	14.71	10.73	7.15	4.92	4.07	2.177
	W	221	156	127.4	107.0	82.1	50.76	29.05	21.29	14.24	9.83	8.15	4.370
1.67V/cell	A	128	87.5	69.6	57.5	43.4	26.28	14.84	10.83	7.20	4.94	4.08	2.183
	W	228	159	129.3	108.6	83.2	51.25	29.28	21.45	14.33	9.86	8.16	4.380
1.60V/cell	A	137	91.2	71.9	59.2	44.4	26.75	15.07	10.99	7.28	4.98	4.10	2.194
	W	240	165	133.2	111.1	84.6	52.04	29.67	21.74	14.47	9.93	8.20	4.400

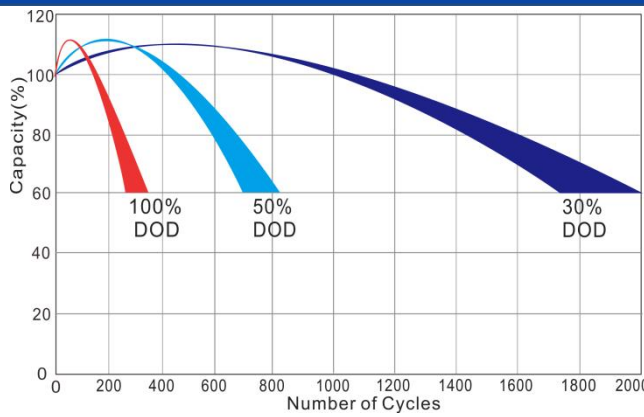
Discharge characteristic curve (25°C/77°F)



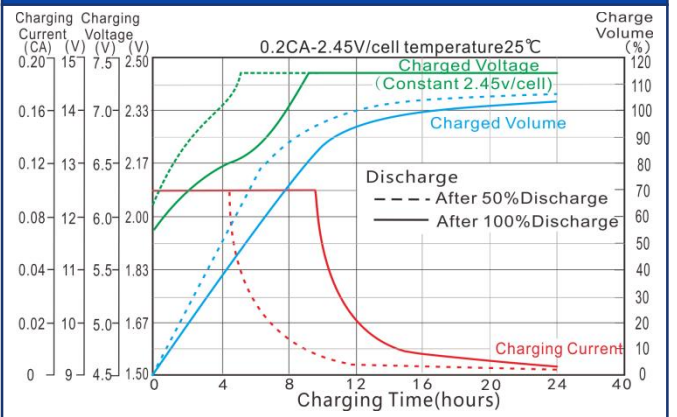
Charging characteristic curve of floating charge (25°C/77°F)



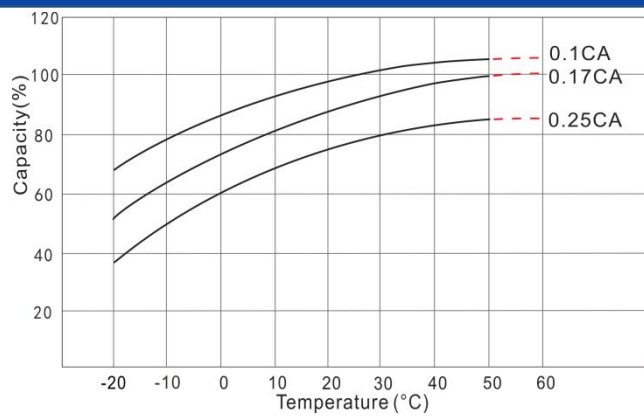
Cycle service life in relation to depth of discharge



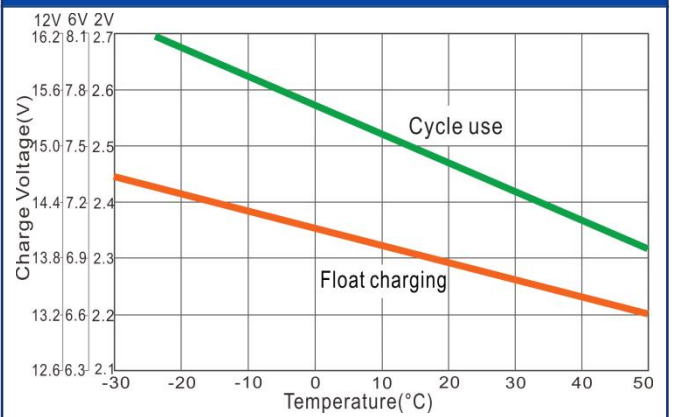
Cyclic charging characteristic curve (25°C/77°F)



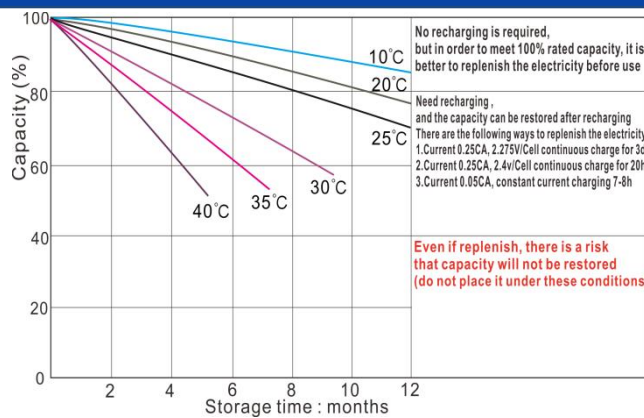
Relationship between temperature and capacity



Relationship between charging voltage and temperature



Self discharge characteristics



Temperature vs Float Life

