

## Valve Regulated Long Life GEL Battery

## GB12-90G

CSBattery GBG series pure GEL battery is with 12-15 years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By adopting thicker grids, high purity 99.997% lead and patented Silicon Gel electrolyte, GBG series offers excellent recovery performance after deep discharge under frequent cyclic discharge use, and can deliver 1200 cycles at 50% DOD even work in hot or cold area. Suitable for Solar, CATV, marine, RV and deep discharge UPS, communication, and tele communication, etc.

12V  
90Ah

GEL  
Technology

Loge Life  
Battery



### Applications

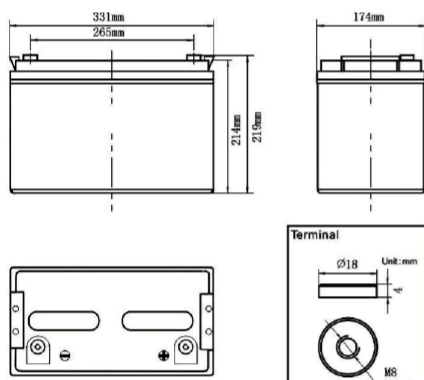
- Telecom Control Equipment
- UPS systems, Inverter
- Power Equipment
- Solar & Wind
- Emergency Power Systems

### General Features

- ✓ 30% more cyclic life through innovation at the PAM additives
- ✓ Long life expectancy of 15 years in floating condition
- ✓ Adopts quality silicon nano gel electrolyte
- ✓ Excellent deep discharge recovery capability
- ✓ Deep cycle performance: up to 1200 cycles@50%DOD

### Dimensions & Weight

Length(mm/inch)	331/13.03
Width(mm/inch)	174/6.85
Height(mm/inch)	214/8.43
Total Height(mm/inch)	219/8.62
Weight(kg/lbs)(±3%)	25.5/56.3



### Technical Specifications

Nominal Voltage		12V(6 cells per unit)
Design Floating Life @25°C		15 Years
Nominal Capacity @25°C(10 hour rate@9.00A,10.8V)		90Ah
Capacity @25°C	20hour rate (5.00A,10.8V)	100Ah
	5 hour rate (16.4A,10.5V)	82Ah
	1 hour rate (59.9A,9.6V)	59.9Ah
Internal Resistance	Full Charged Battery@25°C	≤5.5mΩ
Ambient Temperature	Discharge	-20°C~60°C
	Charge	-10°C~60°C
	Storage	-20°C~60°C
Max.Discharge Current@25°C		540A(5s)
Capacity affected by Temperature (10 hour )	40°C	105%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-Discharge@25°C per Month		3%
Charge (Constant Voltage) @25°C	Standby Use	Initial Charging Current Less than 22.5A Voltage 13.6-13.8V
	Cycle Use	Initial Charging Current Less than 22.5A Voltage 14.4-14.9V

### COMPLIED STANDARDS



### Battery Discharge Table

#### Discharge Constant Current per Cell (Amperes at 25°C)

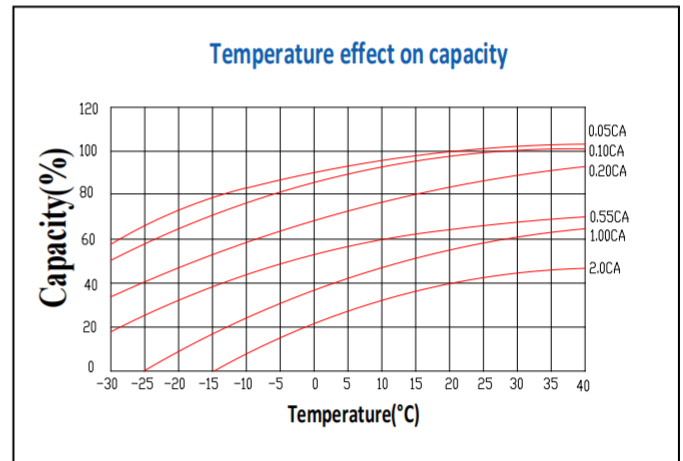
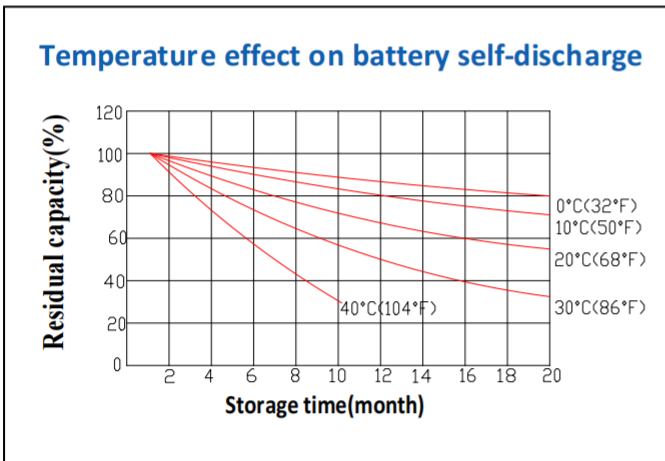
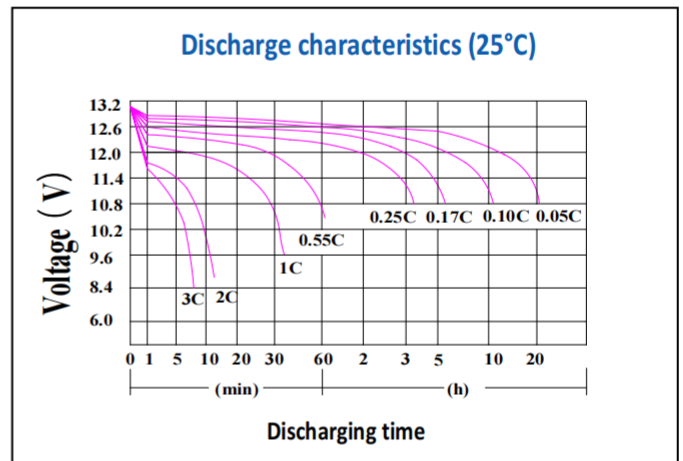
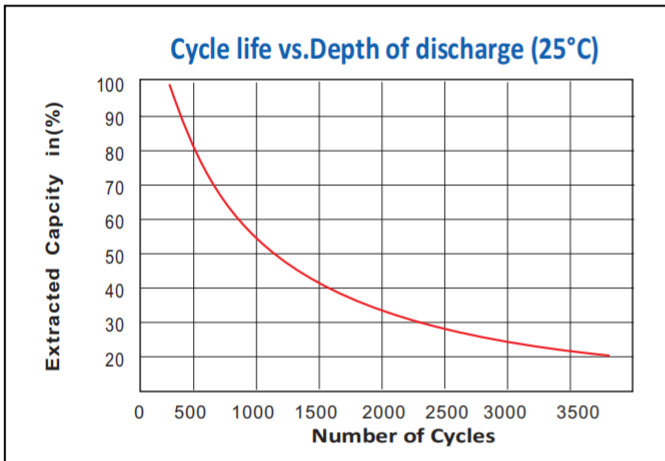
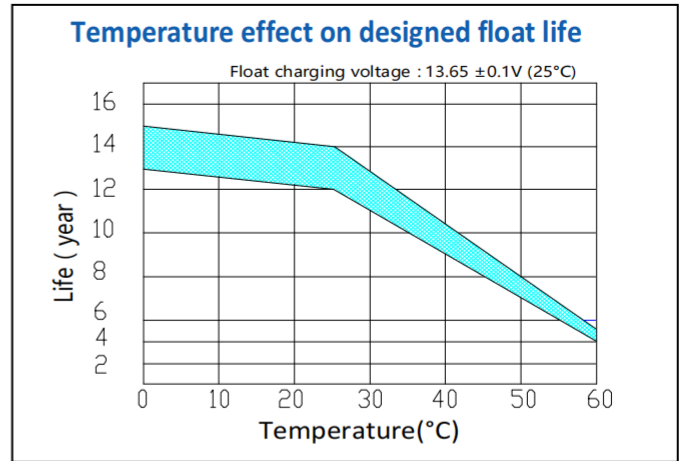
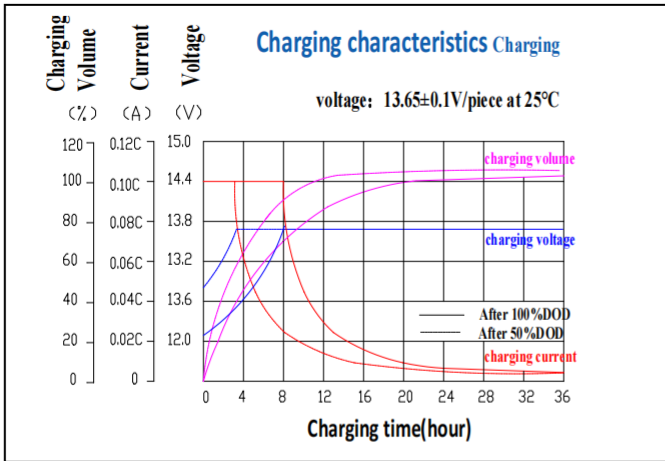
F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	152.0	94.6	67.8	59.9	36.5	26.7	17.2	10.5	9.36	5.19
1.65V	145.6	92.0	66.0	58.3	35.8	26.2	16.9	10.4	9.27	5.14
1.70V	139.3	89.5	64.2	56.7	35.2	25.7	16.7	10.3	9.18	5.09
1.75V	133.0	87.0	62.4	55.1	34.3	25.1	16.4	10.2	9.09	5.04
1.80V	126.6	84.4	60.6	53.5	33.5	24.5	16.2	10.1	9.00	5.00

#### Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	283.4	176.3	126.5	111.7	68.1	49.8	32.0	19.6	17.5	9.7
1.65V	271.6	171.6	123.1	108.7	66.8	48.9	31.6	19.4	17.3	9.6
1.70V	259.8	166.9	119.7	105.7	65.6	47.9	31.1	19.2	17.1	9.5
1.75V	248.0	162.2	116.4	102.7	64.0	46.8	30.7	19.0	17.0	9.4
1.80V	236.2	157.4	113.0	99.7	62.4	45.7	30.2	18.8	16.8	9.3

**Note:** The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact CSBattery for the latest information.

### Performance Characteristics



### Battery Construction

Component	Positive plate	Negative plate	Container & Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	Fire resistance ABS (UL94-V0)	Flame Si-Rubber and aging resistance	Female Copper Insert M8	Advanced PVC /AGM separator for high pressure cell design	Silicon Gel	Two layers epoxy resin seal

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