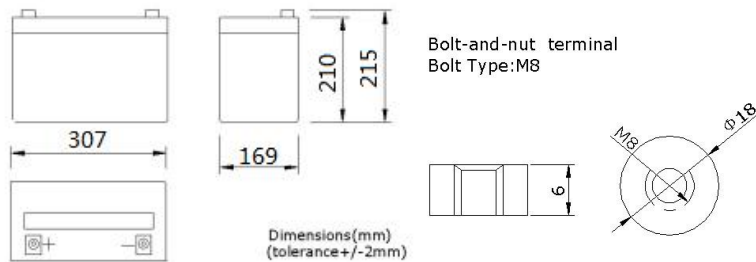


PHYSICAL SPECIFICATION

Nominal Voltage		12V
Nominal Capacity (10HR)		90Ah
Dimension	Length	307±2mm (12.09 inches)
	Width	169±2mm (6.65 inches)
	Container Height	210±2mm (8.27 inches)
	Total Height	215±2mm (8.46 inches)
Weight		Approx. 26.2 Kg ±3% (57.76lbs)
Standard Terminal		Bolt-and-nut terminal Bolt Type: M8



Shimastu Gel series Gel Batteries are manufactured with special separators and silica gel immobilizing the electrolyte inside the battery, it is perfect for frequent cyclic deep discharge or standby applications under harsh environments, and has a long service life.

Features:

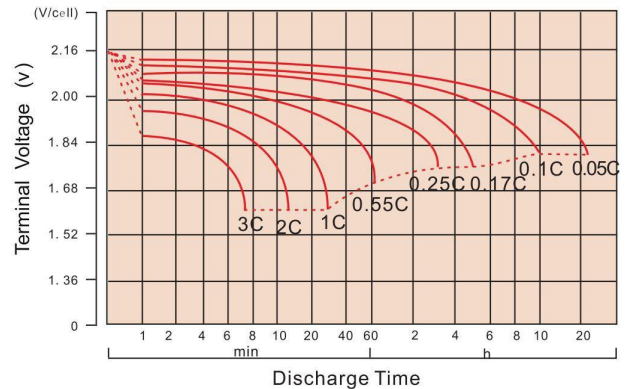
1. Special polar plate design, which ensures a designed floating charge life of 15 years at 25°C (77 °F)
2. Equalized current distribution, the active material is not easy to fall off
3. High gas recombination efficiency
4. Good deep discharge resilience performance
5. No delamination phenomena in the electrolyte
6. Manufactured with high-porosity

ELECTRICAL SPECIFICATION

Characteristics

Capacity	10 hour rate (9A)	90Ah
	5 hour rate (15.3A)	76Ah
	3 hour rate (22.5A)	68Ah
	1 hour rate (49.5A)	49.5Ah
Capacity affected by temperature	40°C (104 °F)	102%
	25°C (77 °F)	100%
	0°C (32 °F)	85%
Max Discharge Current	800A(5 Sec)	
Short Circuit Current	2000A	
Internal Resistance	Full charged battery (25°C, 77 °F) 4mΩ	
Constant Voltage Charge	Cycle	Initial Charging Current less than 22.5A Voltage 14.1~14.4V at 25°C (77 °F) Temperature Coefficient -18mV/°C
	Standby	No limit on Initial Charging Current Voltage 13.5~13.8V at 25°C (77 °F) Temperature Coefficient -18mV/°C

Discharge curves @ 25°C (77 °F)



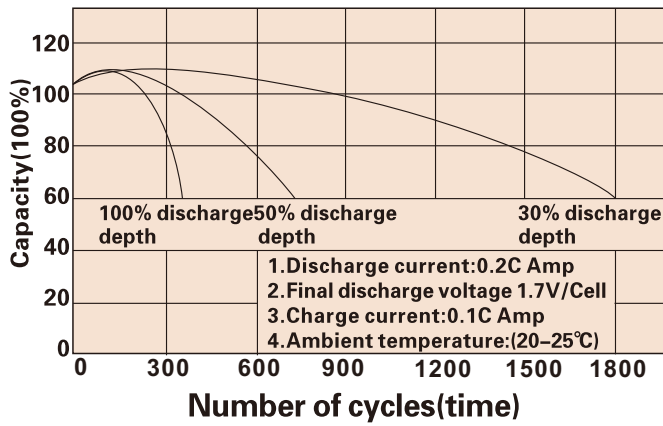
CONSTANT CURRENT DISCHARGE RATING A@25°C

F.V/TIME	10MIN	15MIN	30MIN	1HR	3HR	5HR	8HR	10HR	20HR
1.60V	216.3	162.9	97.3	55.8	25.5	17.0	11.4	9.52	4.96
1.65V	197.0	155.7	93.5	53.7	24.7	16.6	11.3	9.40	4.90
1.70V	179.0	145.9	89.5	51.7	24.0	16.1	11.1	9.24	4.83
1.75V	163.5	135.8	85.3	49.5	23.3	15.7	11.0	9.11	4.77
1.80V	148.5	125.3	81.5	47.7	22.5	15.3	10.8	9.00	4.73

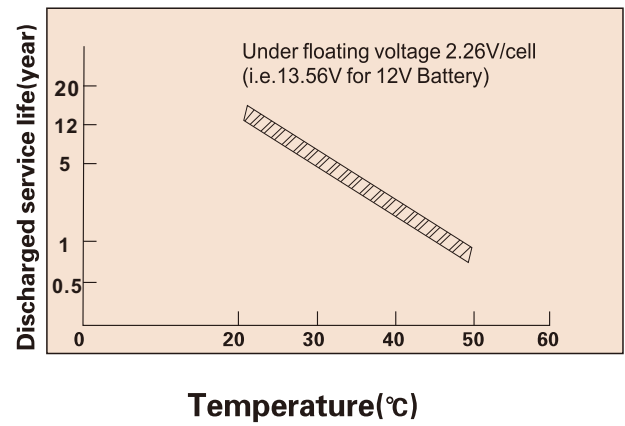
CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

F.V/TIME	10MIN	15MIN	30MIN	1HR	3HR	5HR	8HR	10HR	20HR
1.60V	367.7	284.7	176.8	104.9	48.6	32.9	22.5	18.8	9.76
1.65V	341.3	276.3	171.7	101.5	47.3	32.1	22.1	18.5	9.63
1.70V	315.9	262.7	166.0	98.2	46.2	31.3	21.8	18.3	9.51
1.75V	293.7	248.0	159.7	94.7	45.1	30.6	21.5	18.0	9.41
1.80V	271.4	232.2	154.2	91.8	43.7	29.9	21.3	17.7	9.36

Cycle service life



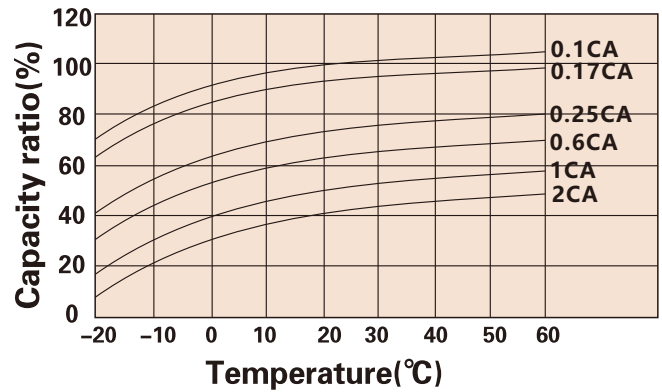
Trickle(or float) service life



Storage time(months)



Temperature and discharge capacity



Charging characteristic



Storage Temperature	Supplementary Charge Interval	Charge Method
≤20°C	Every 12 months	Less or 24 hours with a constant voltage of 2.3V/cell
20-30°C	Every 8 months	12-18 hours with a constant voltage of 2.45V/cell
≥30°C	Storage to be avoided	8-12 hours with a constant current of 0.05CA

APPLICATIONS

Standby Usage:

- UPS
- Emergency Lights
- Alarm Systems
- Telecommunication Systems

Cyclic Usage:

- Medical Equipments
- Electric Instruments
- Toys
- Camcorder and Solar Systems

Motive Usage:

- Golf Cars
- Wheelchairs
- Lawnmowers
- Motorcycle

(Note) All above information shall be changed without prior notice, Shimastu reserves the right to explain and update the latest information.