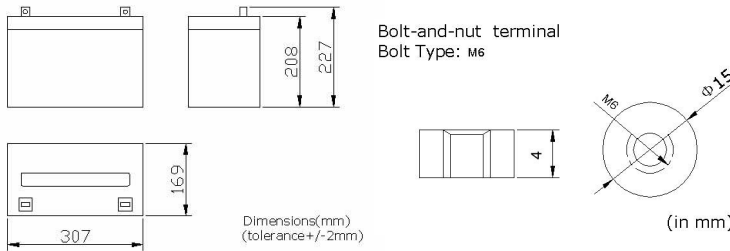


PHYSICAL SPECIFICATION

Nominal Voltage		12V
Nominal Capacity (10HR)		90Ah
Dimension	Length	307±2mm (12.80 inches)
	Width	169±2mm (6.77 inches)
	Container Height	208±2mm (8.54 inches)
	Total Height	227±2mm (9.61 inches)
Weight		Approx. 28.5 Kg ±3% (62.81lbs)
Standard Terminal		B3(Bolt-and-nut terminal) Bolt Type: M6



Shimastu NPL series AGM VRLA Batteries have been developed as long service life purpose batteries, the battery floating service life can target 15 years at 25°C, they're valve-regulated lead acid batteries with high quality Absorbed Glass Mat(AGM) separators & high purity raw materials, featured by perfectly good performance and reliable long service life.

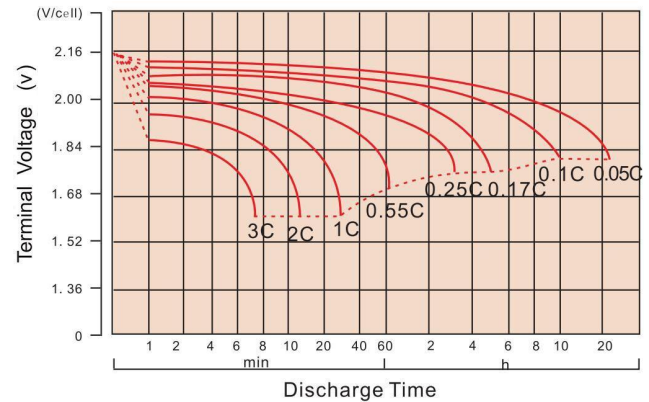
Features:

- 1.Non-spillable
- 2.Sealed and Maintenance-free Operation
- 3.High Quality and High Reliability
- 4.Less gassing,low Self-discharge
- 5.Low internal resistance
- 6.Long Service Life

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)	50Ah
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)



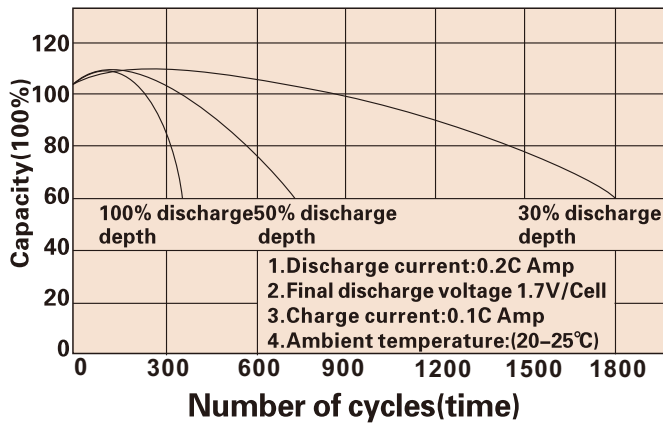
CONSTANT CURRENT DISCHARGE RATING A@25°C

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

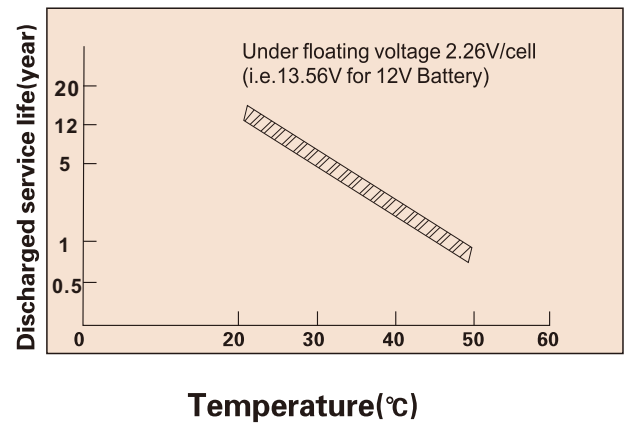
CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

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



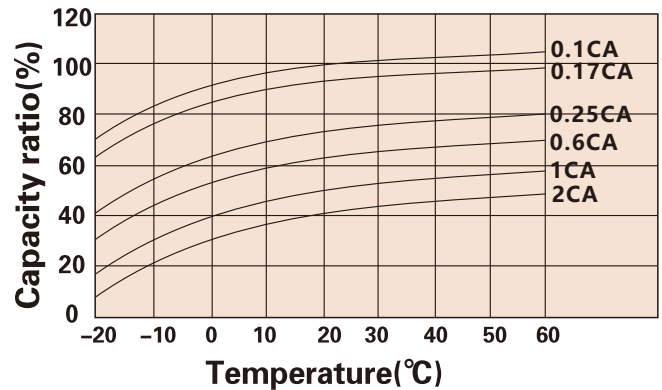
Trickle(or float) service life



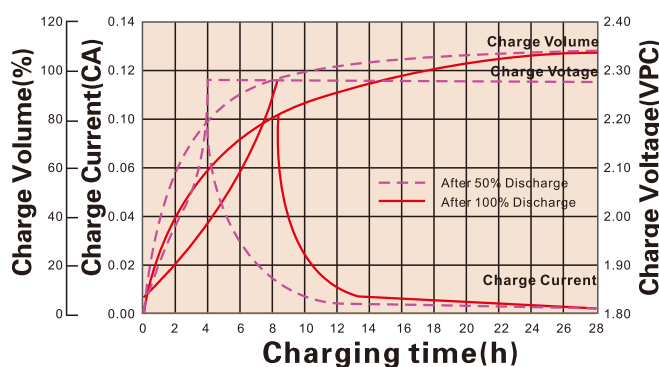
Storage time(months)



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.