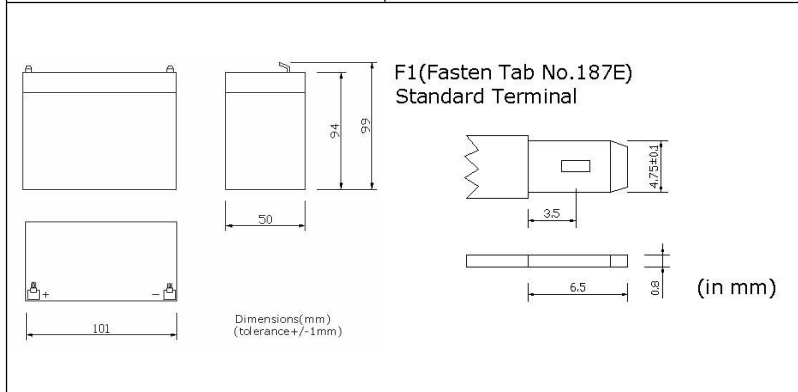


PHYSICAL SPECIFICATION



Nominal Voltage		4V
Nominal Capacity (20HR)		12Ah
Dimension	Length	101±1mm (3.98 inches)
	Width	50±1mm (1.97 inches)
	Container Height	94±1mm (3.70 inches)
	Total Height	99±1mm (3.90 inches)
Weight		Approx. 1.3Kg ±3% (2.87lbs)
Standard Terminal		Fasten Tab No.187E (F1)



Shimastu NP series AGM VRLA Batteries have been developed as general purpose batteries, 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 standby service life.

Features:

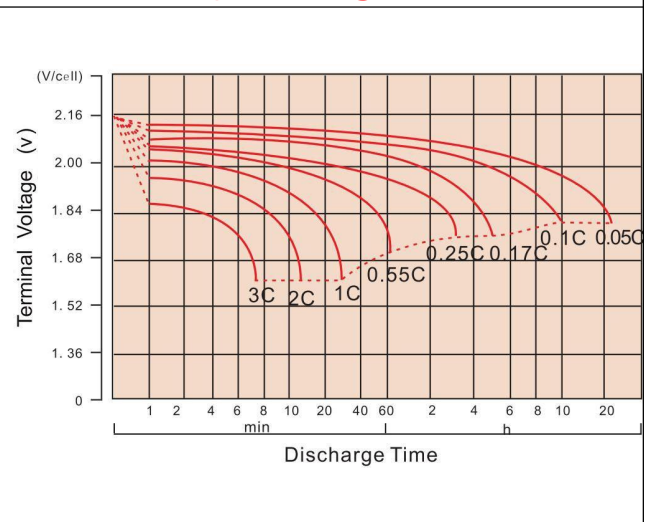
1. Non-spillable
2. Sealed and Maintenance-free Operation
3. High Quality and High Reliability
4. Less gassing, low Self-discharge
5. Low internal resistance
6. Long design life up to 6 years in float service at 25°C (77 °F)

ELECTRICAL SPECIFICATION

Characteristics

Discharge curves @ 25°C (77 °F)

Capacity	20 hour rate (0.6A)	12Ah
	10 hour rate (1.122A)	11.2Ah
	5 hour rate (2.04A)	10.2Ah
	3 hour rate (3A)	9Ah
	1 hour rate (6.6A)	6.6Ah
Capacity affected by temperature	40°C (104 °F)	102%
	25°C (77 °F)	100%
	0°C (32 °F)	85%
Max Discharge Current	120(5 Sec)	
Short Circuit Current	600A	
Internal Resistance	Full charged battery (25°C, 77 °F) 10mΩ	
Constant Voltage Charge	Cycle	Initial Charging Current less than 3A Voltage 4.8~5V at 25°C (77 °F) Temperature Coefficient -18mV/°C
	Standby	No limit on Initial Charging Current Voltage 4.5~4.6V at 25°C (77 °F) Temperature Coefficient -18mV/°C



CONSTANT CURRENT DISCHARGE RATING A@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	44.24	31.59	23.06	13.25	7.344	3.381	2.261	1.182	0.624
1.65V	41.13	29.85	22.05	12.72	7.093	3.276	2.203	1.170	0.613
1.70V	37.12	27.49	20.65	12.15	6.852	3.189	2.146	1.150	0.606
1.75V	33.26	25.16	19.22	11.62	6.600	3.092	2.094	1.135	0.600
1.80V	29.20	22.76	17.76	11.11	6.348	3.000	2.040	1.122	0.595

CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	73.340	53.700	40.310	24.050	13.800	6.457	4.357	2.324	1.228
1.65V	68.970	51.710	39.110	23.340	13.400	6.282	4.262	2.303	1.209
1.70V	63.670	48.500	37.180	22.510	13.030	6.144	4.165	2.267	1.197
1.75V	58.300	45.190	35.100	21.760	12.630	5.982	4.079	2.240	1.186
1.80V	52.280	41.590	32.890	21.010	12.210	5.827	3.988	2.216	1.178

Cycle service life



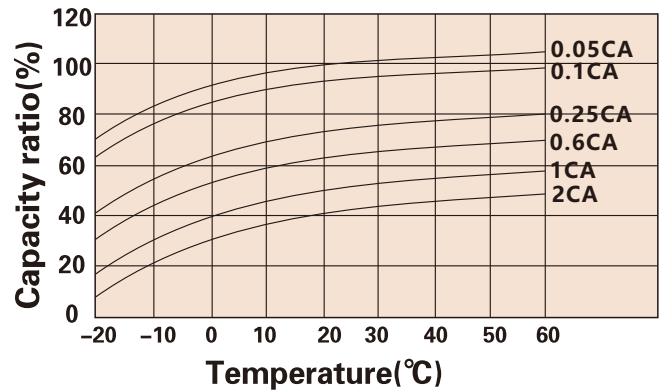
Trickle(or float) service life



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.