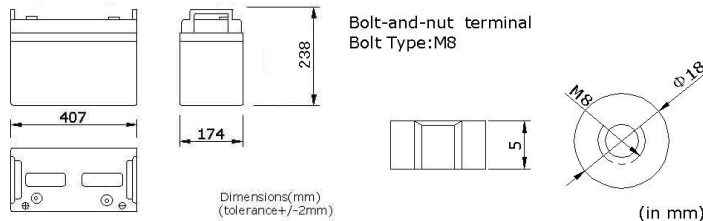


## PHYSICAL SPECIFICATION

|                         |                  |  |
|-------------------------|------------------|--|
| Nominal Voltage         |                  | 12V                                    |
| Nominal Capacity (10HR) |                  | 120Ah                                  |
| Dimension               | Length           | 407±2mm (16.02 inches)                 |
|                         | Width            | 174±2mm (6.85 inches)                  |
|                         | Container Height | 238±2mm (9.37 inches)                  |
|                         | Total Height     | 238±2mm (9.37 inches)                  |
| Weight                  |                  | Approx. 38Kg ±3% ( 83.75lbs)           |
| Standard Terminal       |                  | Bolt-and-nut terminal<br>Bolt Type: M8 |



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:

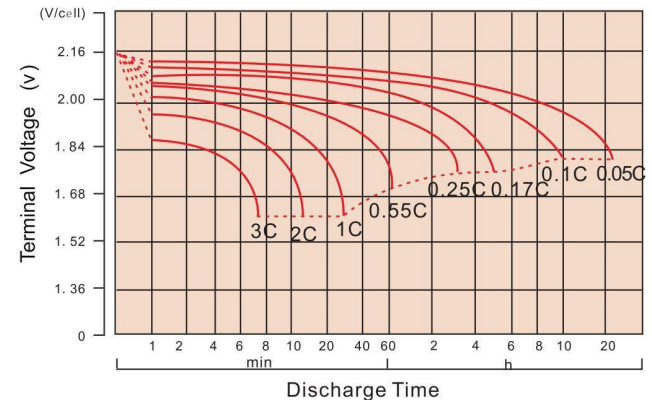
- 1.Non-spillable
- 2.Sealed and Maintenance-free Operation
- 3.High Quality and High Reliability
- 4.Less gassing,low Self-discharge
- 5.Low internal resistance
- 6.Long Service Life

## ELECTRICAL SPECIFICATION

### Characteristics

### Discharge curves @ 25°C (77 °F)

|                                  |  |   |
|----------------------------------|--|---|
| Capacity                         | 10 hour rate (12A)                     | 120Ah   |
|                                  | 5 hour rate (20.4A)                    | 102Ah   |
|                                  | 3 hour rate (30A)                      | 90Ah  |
|                                  | 1 hour rate (66A)                      | 66Ah  |
| Capacity affected by temperature | 40°C (104 °F)                          | 102%  |
|                                  | 25°C (77 °F)                           | 100%  |
|                                  | 0°C (32 °F)                            | 85%   |
| Max Discharge Current            | 1200A(5 Sec)                           |   |
| Short Circuit Current            | 2220A                                  |   |
| Internal Resistance              | Full charged battery (25°C,77 °F)5.2mΩ |   |
| Constant Voltage Charge          | Cycle                                  | Initial Charging Current less than 30A<br>Voltage 14.1~14.4V at 25°C (77 °F )<br>Temperature Coefficient -30mV/°C |
|                                  | Standby                                | No limit on Initial Charging Current<br>Voltage 13.5~13.8V at 25°C (77 °F )<br>Temperature Coefficient -20mV/°C   |



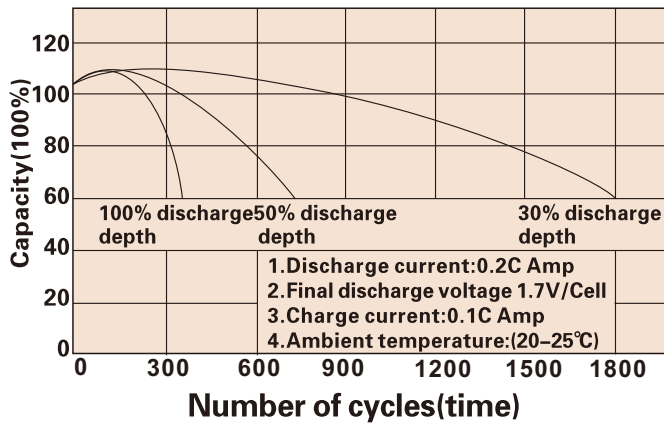
### CONSTANT CURRENT DISCHARGE RATING A@25°C

| F.V/TIME | 10MIN | 15MIN | 30MIN | 1HR  | 3HR  | 5HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|------|------|------|------|------|------|
| 1.60V    | 280.7 | 220.1 | 131.3 | 74.4 | 34.0 | 22.7 | 15.3 | 12.7 | 6.62 |
| 1.65V    | 258.1 | 210.4 | 126.1 | 71.6 | 32.9 | 22.1 | 15.1 | 12.5 | 6.53 |
| 1.70V    | 237.6 | 197.1 | 120.6 | 68.9 | 32.0 | 21.5 | 14.8 | 12.3 | 6.44 |
| 1.75V    | 217.5 | 183.5 | 115.2 | 66.0 | 31.0 | 21.0 | 14.6 | 12.2 | 6.36 |
| 1.80V    | 196.9 | 169.4 | 110.2 | 63.6 | 30.0 | 20.4 | 14.4 | 12.0 | 6.30 |

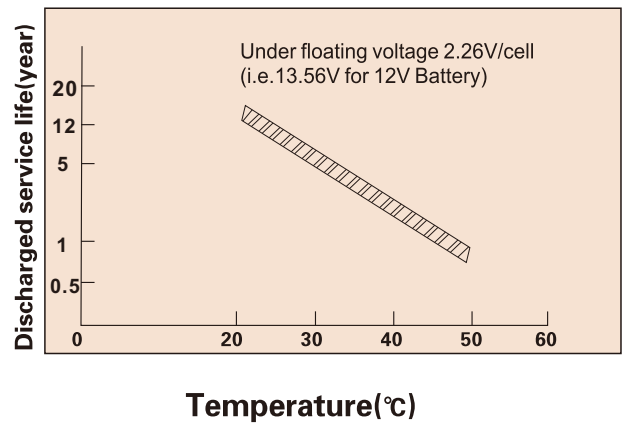
### CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

| F.V/TIME | 10MIN | 15MIN | 30MIN | 1HR   | 3HR  | 5HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V    | 464.4 | 384.8 | 238.6 | 139.9 | 64.8 | 43.9 | 30.0 | 25.1 | 13.0 |
| 1.65V    | 447.3 | 373.3 | 231.5 | 135.3 | 63.1 | 42.7 | 29.5 | 24.7 | 12.8 |
| 1.70V    | 419.3 | 354.8 | 223.5 | 131.0 | 61.6 | 41.8 | 29.1 | 24.3 | 12.7 |
| 1.75V    | 390.7 | 335.1 | 215.6 | 126.3 | 60.1 | 40.9 | 28.7 | 24.0 | 12.6 |
| 1.80V    | 359.8 | 313.9 | 208.4 | 122.4 | 58.2 | 39.9 | 28.4 | 23.6 | 12.5 |

### Cycle service life



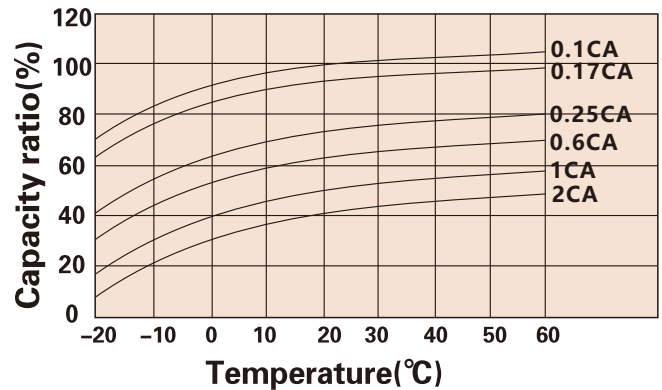
### Trickle (or float) service life



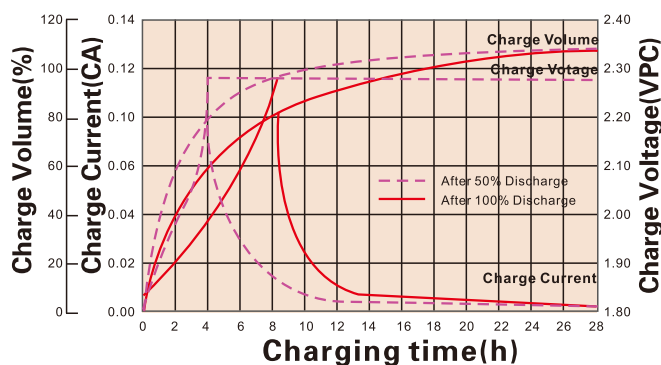
### Storage time (months)



### 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.