

## General features for MPt Series (AGM) battery

- \* Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- \* Computer designed lead, calcium tin alloy grid for high power density.
- \* Long service life, float or cyclic applications.
- \* UL-recognized component.
- \* No need of balanced charge or boost.
- \* Valve Regulated & High Discharge Rate Capability.
- \* Maintenance-free operation. Low self discharge.
- \* Case and cover are available in both standard and flame retardant ABS.
- \* Battery comply to the most popular international standards, like IEC60896-21/22, etc.



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**MP2-2000 (2V2000Ah)**

## Specifications

|                               |                                  |                      |
|-------------------------------|----------------------------------|----------------------|
| Nominal Voltage               |                                  | 2 V                  |
| Rated capacity (10 hour rate) |                                  | 2000 Ah              |
| Dimensions (±2mm)             | Total Height (Include top cover) | 382 mm (15.0 inches) |
|                               | Height                           | 344 mm (13.5 inches) |
|                               | Length                           | 491 mm (19.3 inches) |
|                               | Width                            | 351 mm (13.8 inches) |
| Weight Approx (±3%)           |                                  | 122.0 Kg (268.9 lbs) |

## Battery picture and construction

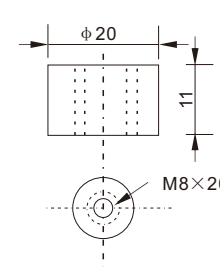


### Battery Construction

|              |                      |                |              |          |
|--------------|----------------------|----------------|--------------|----------|
| Component    | Positive plate       | Negative plate | Container    | Cover    |
| Raw material | Lead dioxide         | Lead           | ABS          | ABS      |
| Component    | Electrolyte          | Separator      | Safety valve | Terminal |
| Raw material | Dilute sulfuric acid | Fibreglass     | Rubber       | Copper   |

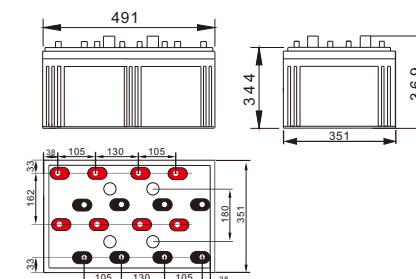
## Outer dimension and terminal

Terminal:T20



Outer dimensions(±2mm)

Unit:mm



(Total height 382mm includes the top cover)

## Characteristics

|   |   |  |
|---|---|--|
| Capacity<br>25°C(77°F)                          | 10 hour rate(200A,1.8V)<br>5 hour rate(320A,1.75V)<br>1 hour rate(1200 A,1.6V)                      | 2000Ah<br>1600Ah<br>1200Ah   |
| Internal Resistance                             | Full charged battery at 25°C(77°F)  | Approx 0.30 mΩ   |
| Capacity affected by Temperature (10hour rate)  | 40°C (104°F)<br>25°C (77°F)<br>0°C (32°F)<br>-15°C (5°F)  | 102%<br>100%<br>85%<br>65%   |
| Remaining capacity Self-Discharge At 25°C(77°F) | Capacity after 3 month storage<br>Capacity after 6 month storage<br>Capacity after 12 month storage | 91%<br>82%<br>64%  |
| Terminal type                                   | T20   |  |
| Max. Discharge current 25°C/(77°F)              | 11000A (5Seconds)   |  |
| Nominal operating temperature                   | 25°C ±5°C(77°F ±9°F)  |  |
| Operating Temperature Range                     | Discharge<br>Charge<br>Storage  | -15°C ~50°C (5°F ~122°F)<br>-10°C ~50°C (14°F ~122°F)<br>-20°C ~50°C (-4°F ~122°F)   |
| Charge methods (constant Voltage) At 25°C(77°F) | Cycle use<br>Standby use  | Initial Charging Current less than 500 A<br>Voltage 2.42-2.48V<br>Temperature compensation:-5mV/°C<br>Voltage 2.25-2.30V<br>Temperature compensation:-3mV/°C |

## Constant current discharge (25°C , 77 °F)

Unit:A

## Constant power discharge (25°C , 77 °F)

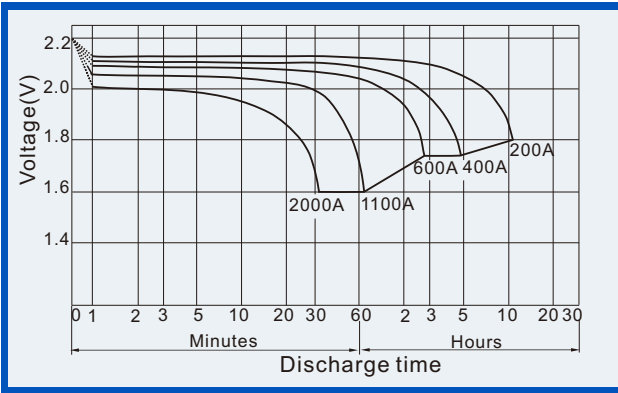
Unit:watts

| Time  | 5min | 10min | 15min | 30min | 1h   | 2h   | 3h    | 4h    | 5h    | 8h    | 10h   | 20h   |       |
|-------|------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V | A    | 6406  | 4220  | 3402  | 2280 | 1200 | 700.0 | 514.0 | 400.0 | 330.0 | 234.0 | 210.0 | 113   |
|       | W    | 11018 | 7512  | 6079  | 4086 | 2160 | 1281  | 953.5 | 750.0 | 625.4 | 446.9 | 404.3 | 220   |
| 1.70V | A    | 6204  | 3808  | 3204  | 2180 | 1128 | 668.0 | 500.0 | 390.0 | 324.0 | 228.0 | 206.0 | 110.0 |
|       | W    | 11043 | 7087  | 5975  | 4079 | 2126 | 1283  | 965.0 | 755.8 | 629.5 | 444.6 | 403.3 | 215.1 |
| 1.75V | A    | 6002  | 3406  | 2802  | 2040 | 1092 | 652.0 | 488.0 | 384.0 | 320.0 | 226.0 | 202.0 | 110.0 |
|       | W    | 10924 | 6458  | 5329  | 3913 | 2108 | 1260  | 947.7 | 748.8 | 625.3 | 443.0 | 398.3 | 216.7 |
| 1.80V | A    | 5784  | 3210  | 2604  | 1880 | 1056 | 636.0 | 476.0 | 378.0 | 312.0 | 220.0 | 200.0 | 108.0 |
|       | W    | 10816 | 6170  | 5000  | 3630 | 2049 | 1241  | 935.3 | 743.9 | 614.6 | 434.5 | 396.2 | 214.4 |
| 1.85V | A    | 5590  | 3008  | 2404  | 1680 | 1020 | 620.0 | 460.0 | 368.0 | 304.0 | 214.0 | 190.0 | 102.0 |
|       | W    | 10565 | 5805  | 4664  | 3276 | 1999 | 1221  | 910.8 | 730.5 | 604.7 | 427.1 | 382.3 | 206.0 |

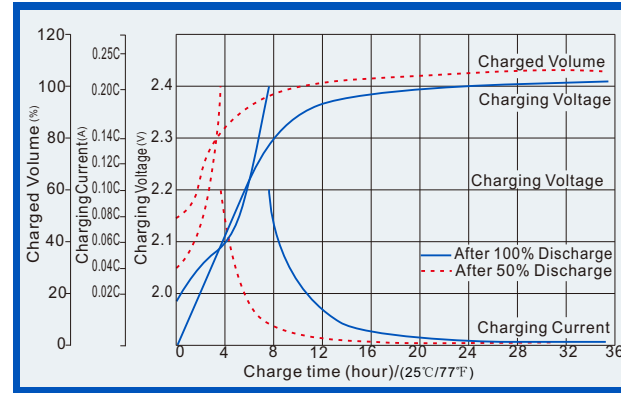
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

# VRLA Battery (AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

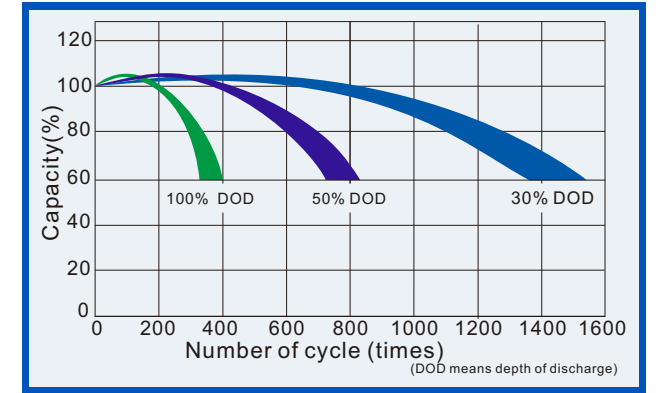
**Discharge characteristics (25°C, 77°F)**



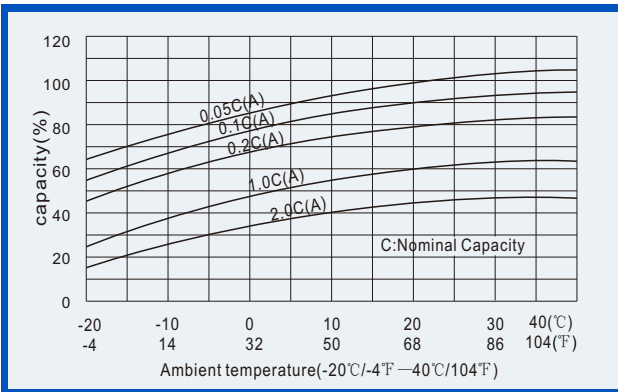
**Charge characteristics (25°C, 77°F)**



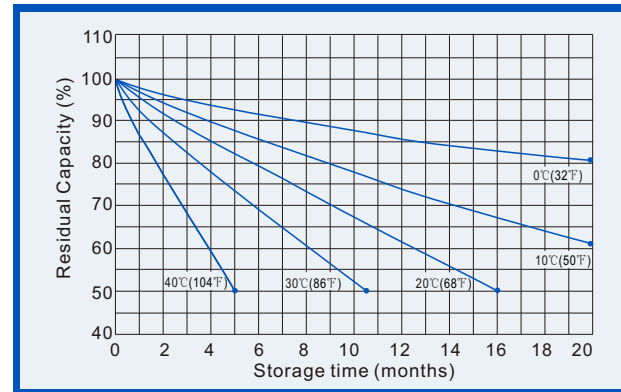
**Life characteristics of Cyclic Use (25°C, 77°F)**



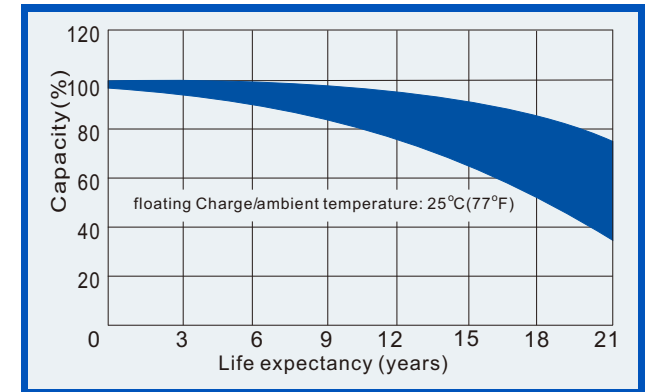
**Effect of Temperature on capacity**



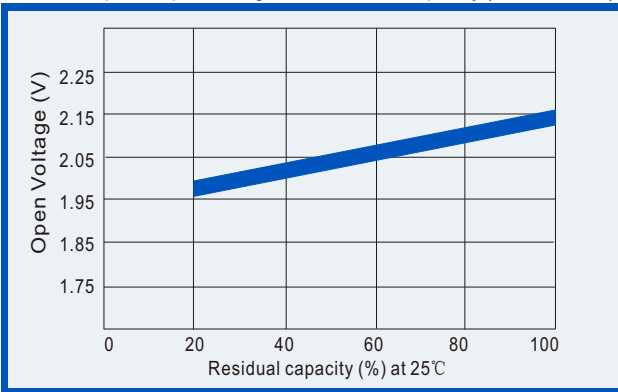
**Self-discharge characteristics**



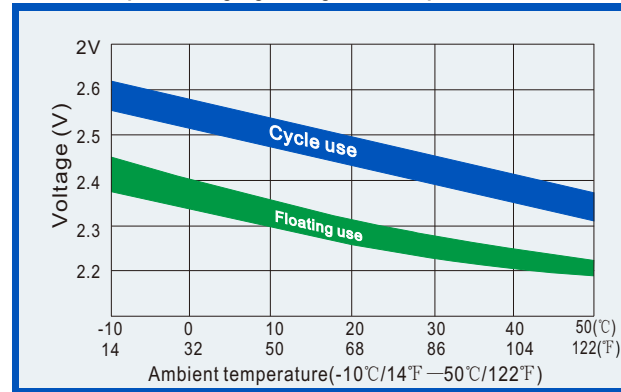
**Life Characteristics of float service (25°C, 77°F)**



**Relationships for open voltage and remained capacity (for reference)**



**Relationship for charging voltage and temperature**



**Temperature effects on floating life**

