

Powered by



MU 1000 ▶ 2V 1000Ah

MU1000 is a long service life battery up to 20 years expected life under normal float charge. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



MH14533(N)



CSB-manufactured VRLA batteries are UL-recognized components under UL924 and UL1989.

CSB is also certified by ISO 9001 and ISO 14001.

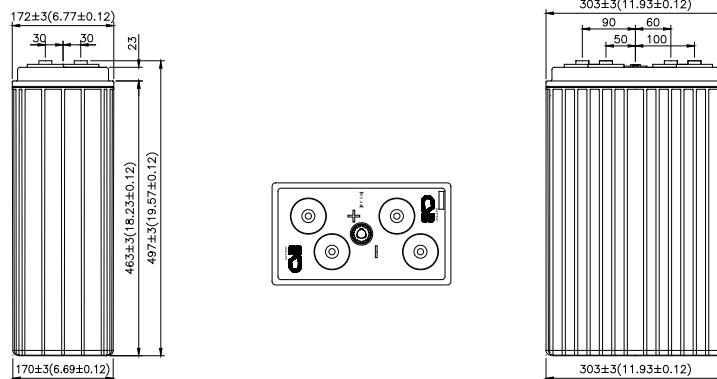
► Specification

| | |
|--|---|
| Cells Per Unit | 1 |
| Voltage Per Unit | 2 |
| Capacity | 1000A h @ 10hr-rate to 1.80V per cell @25 °C(77°F) |
| Weight | Approx. 62.5 kg(137.8 lbs) |
| Maximum Discharge Current | 6000A(5sec) |
| Internal Resistance | Approx. 0.35 mΩ |
| Operating Temperature Range | Discharge: -20°C~50°C(-4°F~122°F) Charge: 0°C~40°C(32°F~104°F) Storage: -20°C~40°C(-4°F~104°F) |
| Nominal Operating Temperature Range | 25°C±3°C(77°F±5°F) |
| Float Charging Voltage | 2.23±0.02/Cell at 25 °C(77°F) Temp. Coefficient ±3.3mV/°C(± 1.8mV/°F) |
| Recommended Maximum Charging Current Limit | 300A |
| Equalization and Cycle Service | 2.35V Temps coefficient ±3.3mV/°C(± 1.8mV/°F) |
| Terminal | Pb-Ca-Sn Alloy(Recessed Terminal) |
| Container Material | The container and cover are made of flame retardant plastics which meet UL 94-V0 specifications. The oxygen index level is higher than 28. |

► Dimensions :

Unit: mm (inch)

| Overall Height (H) | Container height (h) | Length (L) | Width (W) |
|--------------------|----------------------|--------------------|-------------------|
| 497±3 (19.57±0.12) | 463±3 (18.23±0.12) | 303±3 (11.93±0.12) | 172±3 (6.77±0.12) |



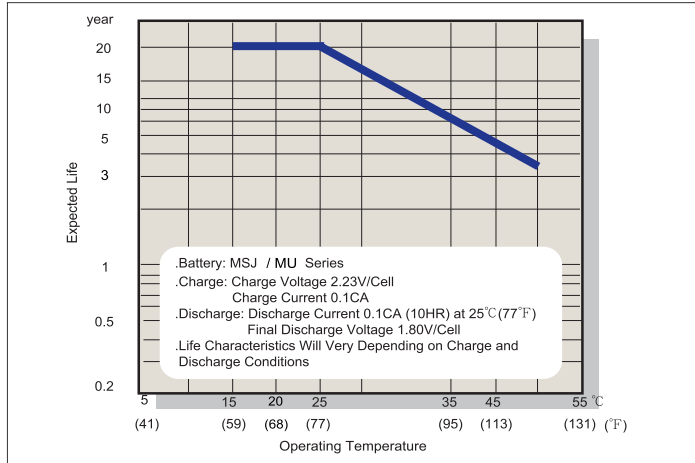
Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

| F.V/Time | 30MIN | 60MIN | 90MIN | 2HR | 3HR | 4HR | 5HR | 6HR | 8HR | 10HR |
|----------|-------|-------|-------|-----|-----|-----|-----|-----|-----|------|
| 1.60V | 1087 | 678 | 509 | 417 | 313 | 246 | 205 | 175 | 137 | 112 |
| 1.67V | 1042 | 662 | 498 | 407 | 306 | 242 | 200 | 172 | 134 | 110 |
| 1.70V | 983 | 637 | 483 | 394 | 295 | 235 | 194 | 167 | 130 | 106 |
| 1.75V | 901 | 602 | 459 | 377 | 283 | 227 | 188 | 162 | 127 | 104 |
| 1.80V | 807 | 553 | 427 | 355 | 267 | 216 | 179 | 155 | 122 | 100 |
| 1.83V | 714 | 503 | 394 | 331 | 250 | 204 | 169 | 146 | 117 | 95.0 |

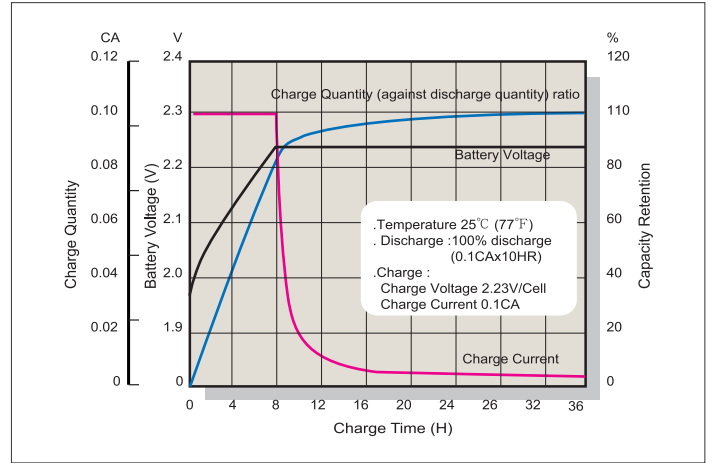
Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

| F.V/Time | 30MIN | 60MIN | 90MIN | 2HR | 3HR | 4HR | 5HR | 6HR | 8HR | 10HR |
|----------|-------|-------|-------|-----|-----|-----|-----|-----|-----|------|
| 1.60V | 1707 | 1173 | 886 | 734 | 554 | 438 | 369 | 317 | 249 | 205 |
| 1.67V | 1678 | 1152 | 872 | 724 | 548 | 436 | 364 | 315 | 247 | 204 |
| 1.70V | 1642 | 1121 | 855 | 709 | 534 | 430 | 357 | 311 | 243 | 199 |
| 1.75V | 1541 | 1066 | 817 | 682 | 515 | 418 | 348 | 303 | 239 | 197 |
| 1.80V | 1420 | 990 | 769 | 650 | 491 | 402 | 335 | 291 | 231 | 190 |
| 1.83V | 1307 | 920 | 725 | 619 | 470 | 388 | 323 | 279 | 225 | 183 |

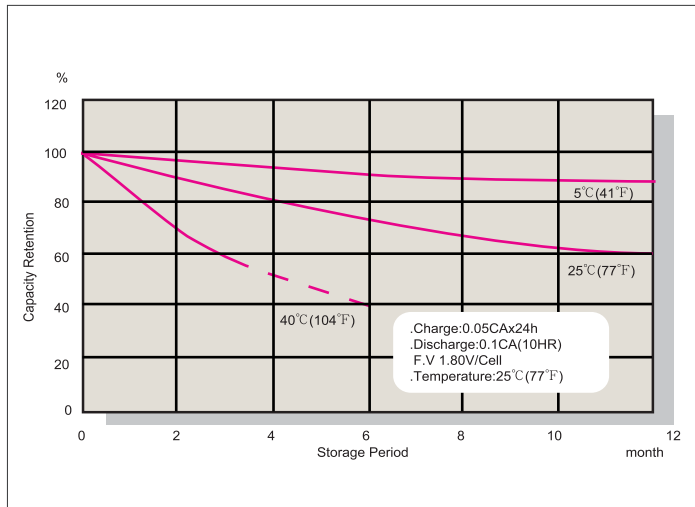
Expected Life V.S Operating Temperature



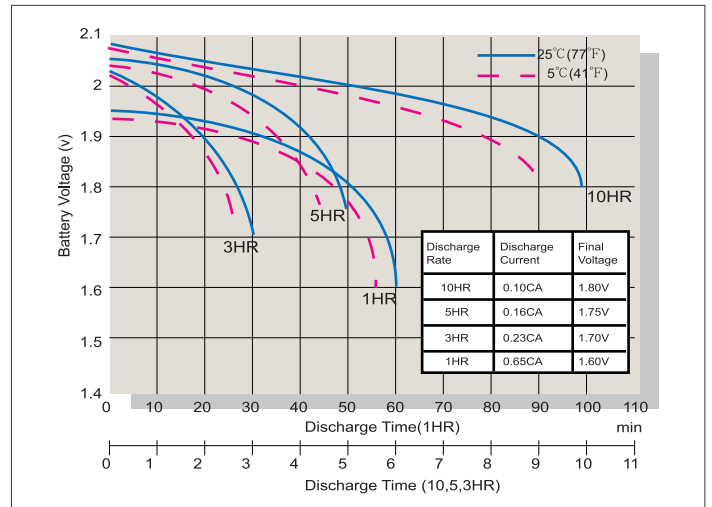
Typical Constant Voltage Charge Characteristics



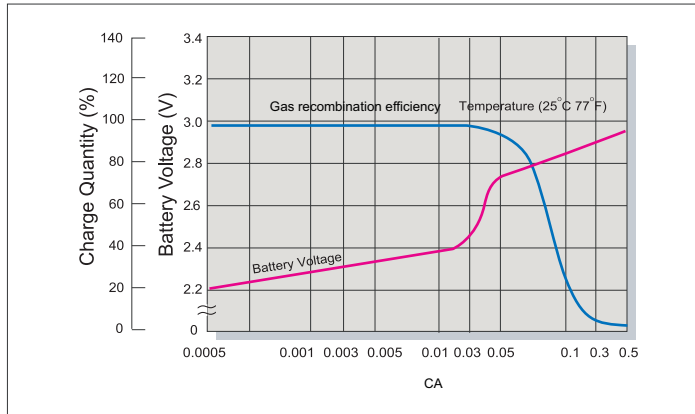
Capacity Retention Characteristics



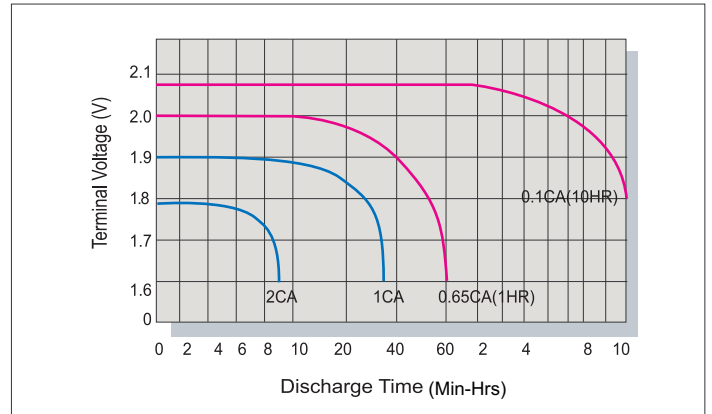
Discharge Characteristics



Oxygen Recombination Efficiency Chart



Terminal Voltage (V) and Discharge Time 25°C (77°F)



Charging Procedures

| Application | Charge Voltage (V/Cell) | | | Max. Charge Current |
|-------------|-------------------------|-----------|-----------------|---------------------|
| | Temperature | Set Point | Allowable Range | |
| Standby | 25°C (77°F) | 2.23 | 2.21~2.25 | 0.3C |

Discharge Current VS. Discharge Voltage

| Discharge Current (A) | Final Discharge Voltage (V/Cell) |
|-----------------------|----------------------------------|
| 0.05C > A | 1.90 |
| 0.15C > A ≥ 0.05C | 1.80 |
| 0.20C > A ≥ 0.15C | 1.75 |
| 0.40C > A ≥ 0.20C | 1.70 |
| A > 0.40C | 1.60 |

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