



# MSJ 800

## 2V 800Ah

MSJ 800 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.



### Specification

|                                            |                                                                                                                                                            |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cells Per Unit                             | 1                                                                                                                                                          |
| Voltage Per Unit                           | 2                                                                                                                                                          |
| Capacity                                   | 800Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)                                                                                                          |
| Weight                                     | Approx. 57 kg(125.66 lbs)                                                                                                                                  |
| Maximum Discharge Current                  | 4800A(5sec)                                                                                                                                                |
| Internal Resistance                        | Approx. 1.42 mΩ                                                                                                                                            |
| Operating Temperature Range                | Discharge: -20°C~50°C (-4°F~122°F)<br>Charge: 0°C~40°C (32°F~104°F)<br>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.<br>Coefficient ±3.3mV/°C (± 1.8mV/°F)                                                                                 |
| Recommended Maximum Charging Current Limit | 240A                                                                                                                                                       |
| Equalization and Cycle Service             | 2.35V Temps coefficient ±3.3mV/°C (± 1.8mV/°F)                                                                                                             |
| Terminal                                   | Pb-Ca-Sn Alloy(L / Recessed Terminal)                                                                                                                      |
| Container Material                         | The container and cover are made of flame retardant plastics which meet ABS(UL 94-V0/File E88637) specifications. The oxygen index level is higher than 28 |



MH14533(N)



ISO9001  
No :041005117

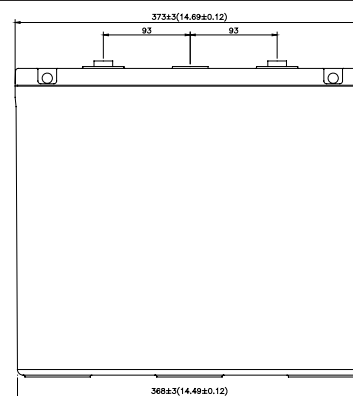
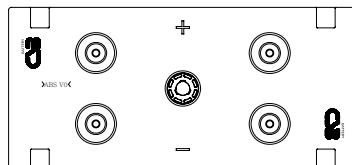
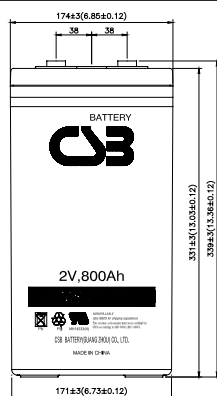


ISO 14001  
NO.UM 1-12-0045

CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

### Dimensions

Unit:(mm)



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

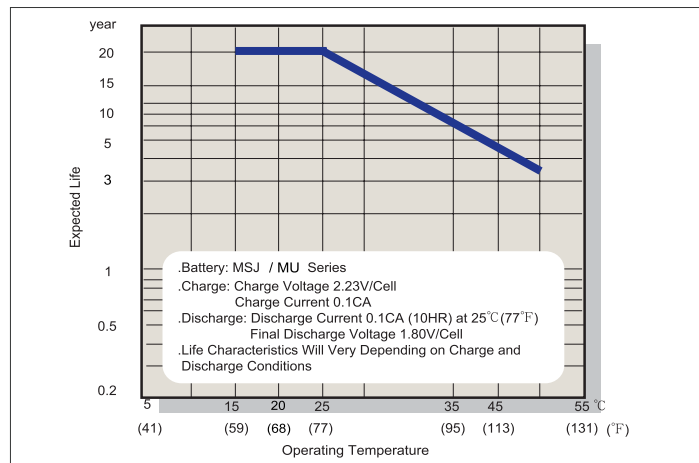
| F.V/Time | 15MIN | 30MIN | 60MIN | 2HR | 3HR | 4HR | 5HR | 6HR | 8HR  | 10HR |
|----------|-------|-------|-------|-----|-----|-----|-----|-----|------|------|
| 1.60V    | 1270  | 843   | 517   | 307 | 229 | 182 | 154 | 133 | 107  | 90.0 |
| 1.65V    | 1208  | 810   | 494   | 296 | 219 | 176 | 147 | 130 | 102  | 86.0 |
| 1.70V    | 1126  | 763   | 485   | 291 | 214 | 174 | 146 | 126 | 101  | 85.0 |
| 1.75V    | 1000  | 678   | 446   | 275 | 203 | 165 | 139 | 120 | 98.0 | 83.0 |
| 1.80V    | 861   | 626   | 421   | 262 | 195 | 163 | 134 | 118 | 96.0 | 80.0 |
| 1.83V    | 728   | 563   | 389   | 248 | 186 | 150 | 128 | 112 | 91.0 | 77.0 |

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

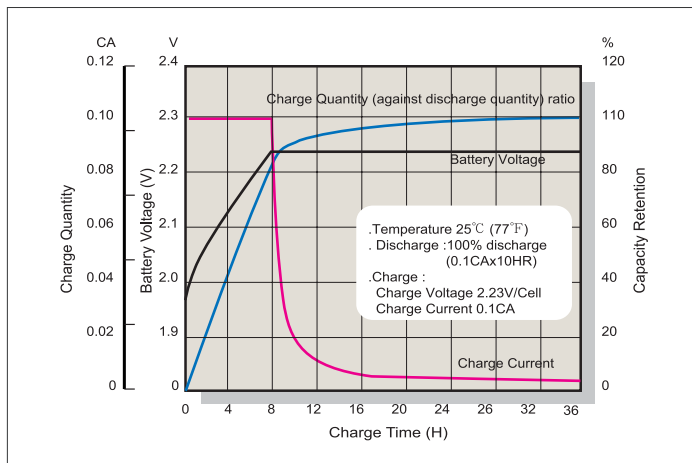
| F.V/Time | 15MIN | 30MIN | 60MIN | 2HR | 3HR | 4HR | 5HR | 6HR | 8HR | 10HR |
|----------|-------|-------|-------|-----|-----|-----|-----|-----|-----|------|
| 1.60V    | 2224  | 1499  | 923   | 555 | 416 | 334 | 283 | 251 | 200 | 170  |
| 1.65V    | 2203  | 1491  | 920   | 547 | 414 | 331 | 280 | 248 | 198 | 168  |
| 1.70V    | 2027  | 1387  | 891   | 539 | 402 | 326 | 277 | 243 | 195 | 166  |
| 1.75V    | 1822  | 1250  | 832   | 515 | 387 | 315 | 266 | 232 | 190 | 162  |
| 1.80V    | 1568  | 1152  | 784   | 493 | 371 | 306 | 258 | 227 | 184 | 157  |
| 1.83V    | 1326  | 1038  | 723   | 464 | 354 | 282 | 246 | 214 | 176 | 152  |

- All mentioned values are average values.
- Cycle Information : 300~400 cycles@DOD80%, 600~700 cycles@DOD50%, 900~1200 cycles@DOD30%
- Tolerance: X<6min(+15%~-15%), 6min ≤ X<10min(+12%~-12%), 10min ≤ X<60min(+8%~-8%), X ≥ 60min(+5%~-5%)

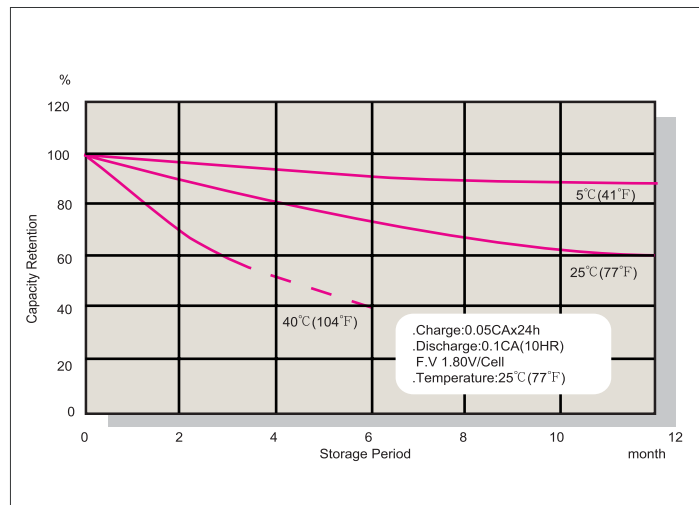
## Expected Life V.S Operating Temperature



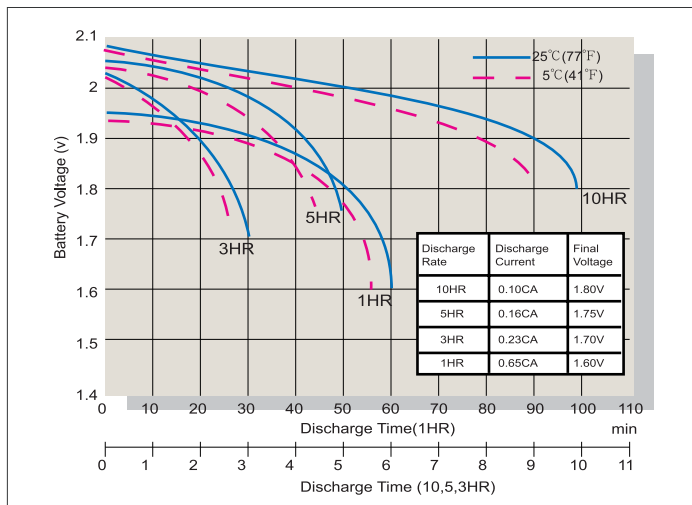
## Typical Constant Voltage Charge Characteristics



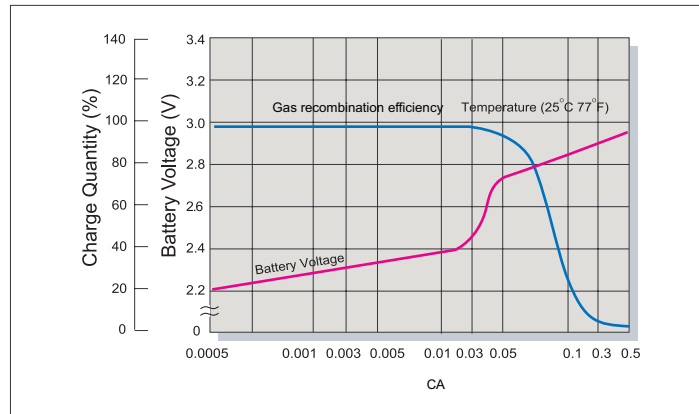
## Capacity Retention Characteristics



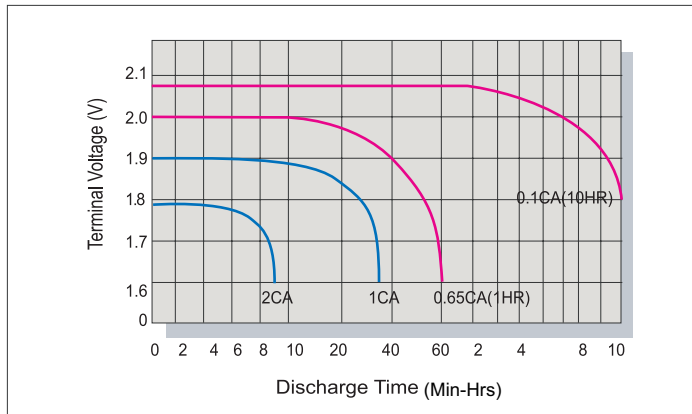
## Discharge Characteristics



## 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                             |

Sales Office URL: [WWW.CSB-BATTERY.COM](http://WWW.CSB-BATTERY.COM)

CSB BATTERY CO., LTD.  
 TAIWAN OFFICE  
 Tel: +886-2-2555-5600  
 Fax: +886-2-2555-3300  
 E-mail: service@csb-battery.com.tw

CSB BATTERY TECHNOLOGIES (BEIJING) CO., LTD.  
 BEIJING OFFICE  
 Tel: +86-10-59621300/59621301/59621302/59621303  
 Fax: +86-10-59621304  
 mail: chinasisl@csb-battery.com

CSB BATTERY TECHNOLOGIES, INC  
 USA OFFICE  
 Tel: +1-817-244-7777/1-8003 CSBUSA(272872)  
 Fax: +1-817-244-4445  
 E-mail: csb@csb-battery.com

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.  
 SHANGHAI OFFICE  
 Tel: +86-21-5046-1622, 5046-0833  
 Fax: +86-21-5064-3314  
 E-mail: chinasisl@csb-battery.com

CSB BATTERY OF NETHERLANDS B.V  
 NETHERLANDS OFFICE  
 Tel: +31(0) 180 418 140  
 Fax: +31(0) 180 418 327  
 E-mail: eurosales@csb-battery.com

CSB BATTERY LOGISTIC (SHANGHAI) CO., LTD.  
 SHENZHEN OFFICE  
 Tel: +86-755-8831-6488/6396/16356  
 Fax: +86-755-8831-6548  
 mail: she@csb-battery.com.cn