

Powered by



# EVH 12390 ▶ 12V 39Ah

EVH 12390 is designed specially for electric vehicles, such as electric golf cart, electric wheelchair, mower, dust collector...etc. It has high cycling life, high efficiency and long service life.



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.

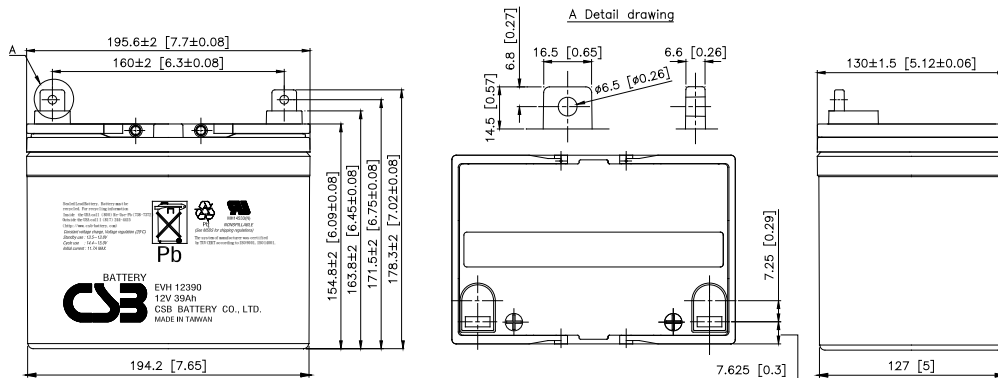
## Specification

|                                            |                                                                                                                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cells Per Unit                             | 6                                                                                                                                                                  |
| Voltage Per Unit                           | 12                                                                                                                                                                 |
| Capacity                                   | 39Ah @ 20hr-rate to 1.75V per cell @25 °C (77°F)                                                                                                                   |
| Weight                                     | Approx. 11.5 kg (25.35 lbs)                                                                                                                                        |
| Maximum Discharge Current                  | 400A(5sec)                                                                                                                                                         |
| Internal Resistance                        | Approx. 8 mΩ                                                                                                                                                       |
| Operating Temperature Range                | Discharge: -15°C~50°C ( 5°F~122°F)<br>Charge: -15 °C~40°C ( 5°F~104°F)<br>Storage: -15°C~40°C ( 5°F~104°F)                                                         |
| Nominal Operating Temperature Range        | 25°C±3°C(77°F±5°F)                                                                                                                                                 |
| Float Charging Voltage                     | 13.5 to 13.8 VDC/unit Average at 25°C(77°F)                                                                                                                        |
| Recommended Maximum Charging Current Limit | 11.7A                                                                                                                                                              |
| Equalization and Cycle Service             | 14.4 to 15.0 VDC/unit Average at 25°C(77°F)                                                                                                                        |
| Self Discharge                             | CSB Batteries can be stored for more than 6 months at 25°C(77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter. |
| Terminal                                   | B5-L terminal to accept M6 nut & bolt                                                                                                                              |
| Container Material                         | ABS(UL 94-HB/File E50263)*Flammability resistance of (UL 94-V0/File E88637) can be available upon request.                                                         |

## Dimensions :

Unit: mm (inch)

| Overall Height (H)  | Container height (h) | Length (L)         | Width (W)           |
|---------------------|----------------------|--------------------|---------------------|
| 178.3±2 (7.02±0.08) | 154.8±2 (6.09±0.08)  | 195.6±2 (7.7±0.08) | 130±1.5 (5.12±0.06) |



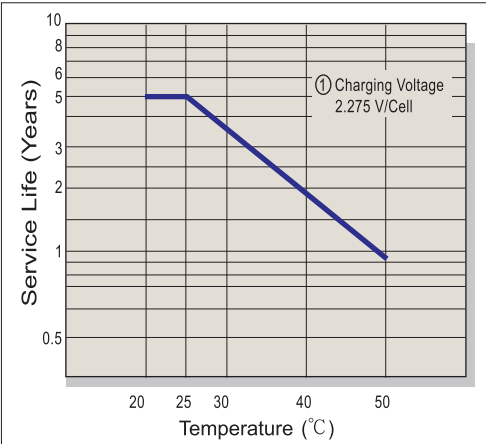
## Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

| F.V/Time | 30MIN | 60MIN | 90MIN | 2HR  | 3HR  | 4HR  | 5HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|------|------|------|------|------|------|------|
| 1.60V    | 39.6  | 23.3  | 17.8  | 14.4 | 10.4 | 8.25 | 6.93 | 4.68 | 3.89 | 2.13 |
| 1.67V    | 38.5  | 22.9  | 17.5  | 14.2 | 10.3 | 8.19 | 6.87 | 4.60 | 3.81 | 2.06 |
| 1.70V    | 37.4  | 22.4  | 17.2  | 14.0 | 10.2 | 8.13 | 6.79 | 4.53 | 3.73 | 2.01 |
| 1.75V    | 36.4  | 22.0  | 16.8  | 13.7 | 10.1 | 8.04 | 6.71 | 4.46 | 3.67 | 1.96 |
| 1.80V    | 35.4  | 21.6  | 16.6  | 13.5 | 9.93 | 7.94 | 6.62 | 4.40 | 3.60 | 1.91 |
| 1.85V    | 34.3  | 21.1  | 16.2  | 13.3 | 9.78 | 7.80 | 6.52 | 4.33 | 3.54 | 1.87 |

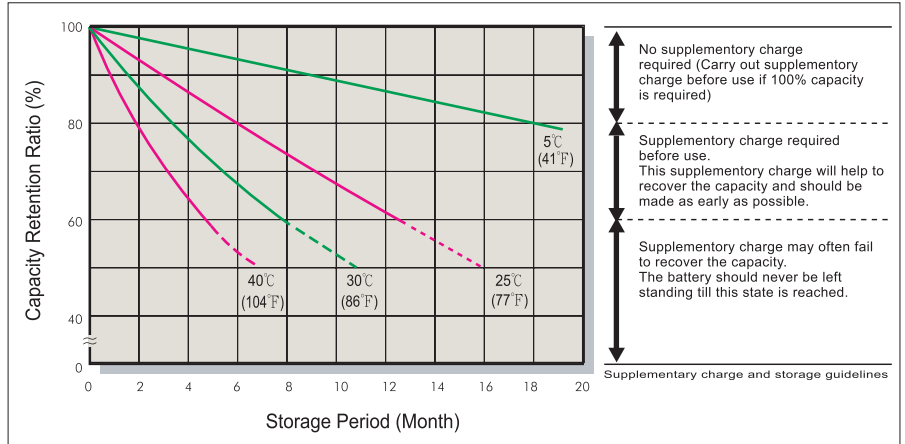
## Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

| F.V/Time | 30MIN | 60MIN | 90MIN | 2HR | 3HR | 4HR  | 5HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|-----|-----|------|------|------|------|------|
| 1.60V    | 475   | 280   | 213   | 172 | 124 | 99.0 | 83.2 | 56.2 | 46.6 | 25.5 |
| 1.67V    | 463   | 276   | 210   | 170 | 123 | 98.1 | 82.4 | 55.3 | 45.6 | 24.8 |
| 1.70V    | 451   | 271   | 207   | 168 | 122 | 97.2 | 81.5 | 54.4 | 44.8 | 24.1 |
| 1.75V    | 438   | 265   | 204   | 166 | 120 | 96.2 | 80.5 | 53.6 | 44.0 | 23.5 |
| 1.80V    | 425   | 260   | 201   | 163 | 119 | 95.0 | 79.4 | 52.8 | 43.3 | 22.9 |
| 1.85V    | 412   | 253   | 197   | 160 | 117 | 93.7 | 78.2 | 52.0 | 42.6 | 22.4 |

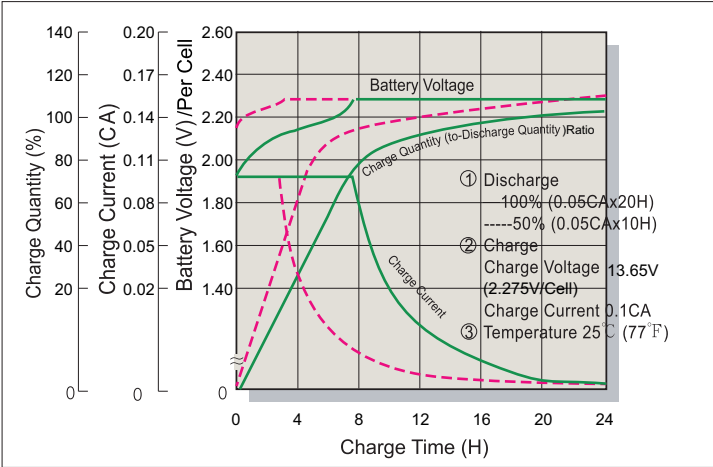
### Trickle (or Float) Service Life



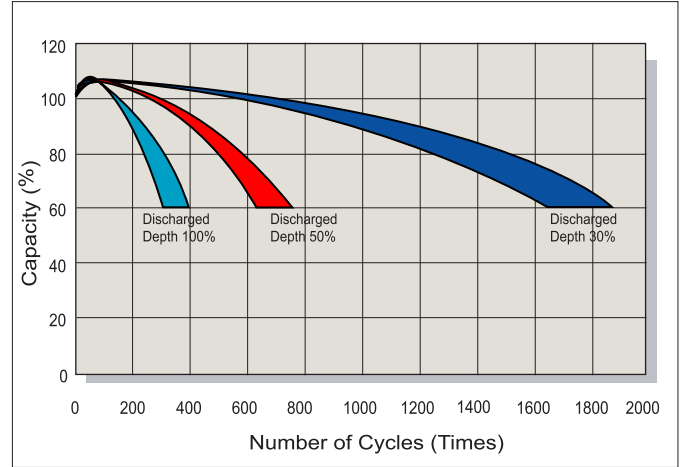
### Capacity Retention Characteristic



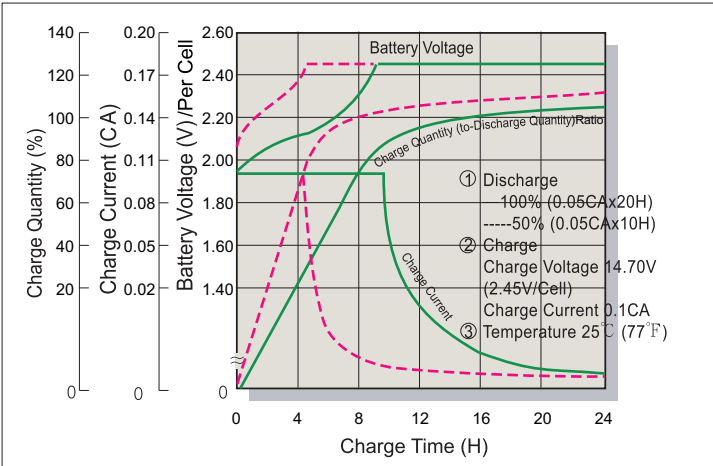
### Battery Voltage and Charge Time for Standby Use



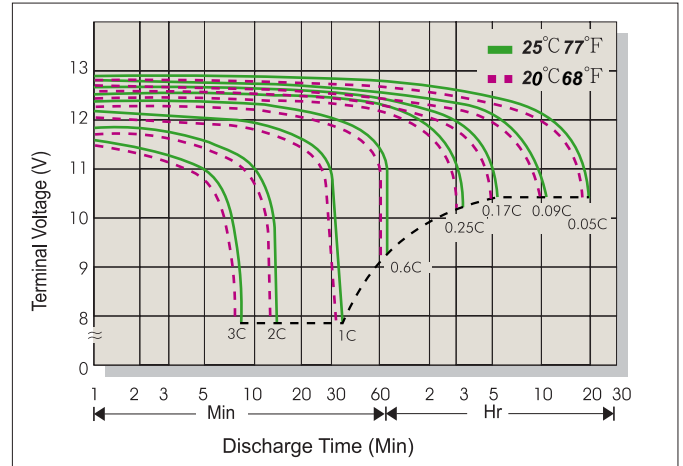
### Series Cycle Service Life



### Battery Voltage and Charge Time for Cycle Use



### Terminal Voltage (V) and Discharge Time



### Charging Procedures

| Application | Charge Voltage(V/Cell) |           |                 | Max.Charge Current |
|-------------|------------------------|-----------|-----------------|--------------------|
|             | Temperature            | Set Point | Allowable Range |                    |
| Cycle Use   | 25°C(77°F)             | 2.45      | 2.40~2.50       | 0.3C               |
| Standby     | 25°C(77°F)             | 2.275     | 2.25~2.30       |                    |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/Cell | 1.75     | 1.70          | 1.60          | 1.30     |
|--------------------------------|----------|---------------|---------------|----------|
| Discharge Current(A)           | 0.2C>(A) | 0.2C<(A)<0.5C | 0.5C<(A)<1.0C | (A)>1.0C |

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