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# TPL 121250A ▶ 12V 125Ah

TPL 121250A is a front terminal battery up to 12 years expected life under normal float charge As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



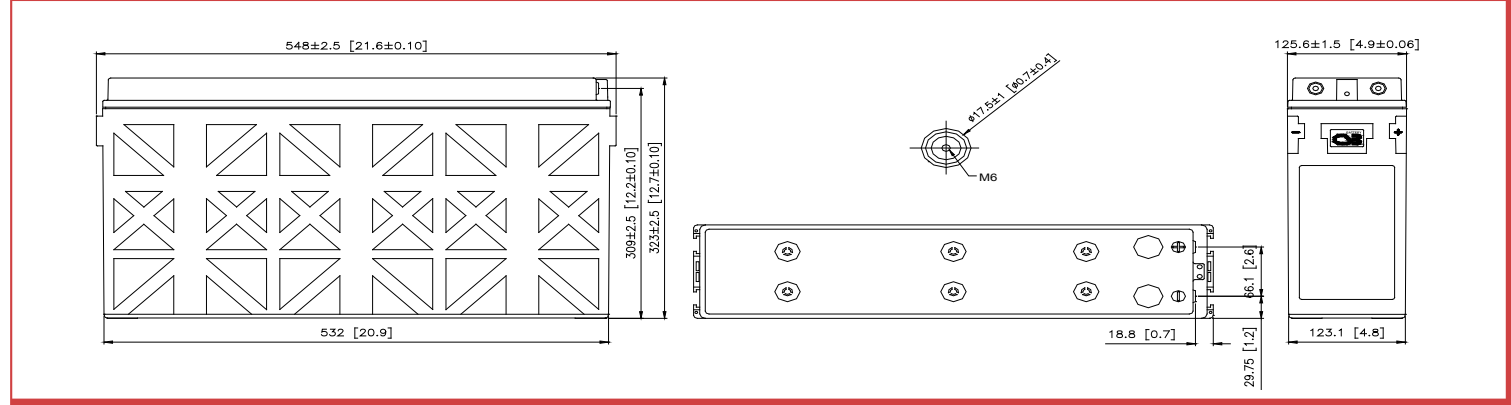
CSB-manufactured VRLA batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

## ► Specification

|  |   |
|--|---|
| Cells Per Unit                             | 6   |
| Voltage Per Unit                           | 12  |
| Capacity                                   | 125Ah @ 8hr-rate to 1.75V per cell @25 °C (77°F)  |
| Weight                                     | Approx. 44.7kg(98.55 lbs)   |
| Maximum Discharge Current                  | 800A(5sec)  |
| Internal Resistance                        | Approx. 4.1 m Ω   |
| 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                     | 2.275 ± 0.025V / Cell at 25 °C (77°F) Temp.<br>Coefficient ±3.3mV/°C(± 1.8mV/°F)                          |
| Recommended Maximum Charging Current Limit | 37.5A   |
| Equalization / Cycle Use Charging Voltage  | 2.45V Temps coefficient ±0.05mV/°C(± 1.8mV/°F)  |
| Terminal                                   | I2-Thread lead alloy recessed terminal to accept M6 bolt  |
| Terminal Hardware Initial Torque           | 91-in-lbs.(10.32 N-m)   |
| Container Material                         | ABS(UL94-V0/File E88637)&(UL94-HB/File E50263)/L.O.I higher than 28                                       |

## ► Dimensions :

|                                       |                    |                      |
|---------------------------------------|--------------------|----------------------|
| Overall Height (H)<br>Unit: mm (inch) | Length (L)         | Width (W)            |
| 323±2.5 (12.7±0.1)                    | 548±2.5 (21.6±0.1) | 125.6±1.5 (4.9±0.06) |



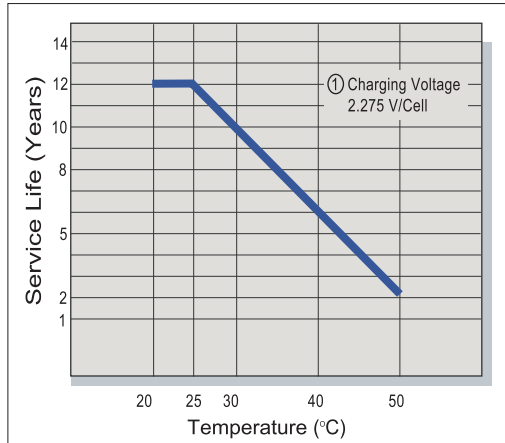
## Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

| F.V/Time | 15MIN | 30MIN | 60MIN | 90MIN | 2HR  | 3HR  | 4HR  | 5HR  | 6HR  | 7HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.67V    | 232   | 147   | 86.3  | 63.0  | 50.2 | 37.0 | 29.8 | 24.7 | 21.1 | 18.4 | 16.3 | 13.3 | 6.95 |
| 1.70V    | 220   | 142   | 84.4  | 61.8  | 49.1 | 36.6 | 29.4 | 24.4 | 20.8 | 18.1 | 15.9 | 13.1 | 6.88 |
| 1.75V    | 199   | 132   | 81.2  | 59.3  | 47.2 | 35.2 | 28.5 | 23.4 | 20.0 | 17.5 | 15.6 | 12.8 | 6.72 |
| 1.80V    | 176   | 121   | 76.7  | 56.4  | 45.1 | 33.8 | 27.2 | 22.7 | 19.5 | 17.0 | 15.1 | 12.5 | 6.56 |
| 1.83V    | 162   | 115   | 73.1  | 54.5  | 43.8 | 32.7 | 26.4 | 22.0 | 19.0 | 16.5 | 14.6 | 12.0 | 6.41 |
| 1.85V    | 153   | 110   | 70.4  | 52.7  | 42.8 | 31.9 | 25.5 | 21.5 | 18.5 | 16.2 | 14.4 | 11.9 | 6.25 |
| 1.90V    | 131   | 98.2  | 64.3  | 49.1  | 40.1 | 29.5 | 23.4 | 19.5 | 16.6 | 14.7 | 13.1 | 10.9 | 5.78 |

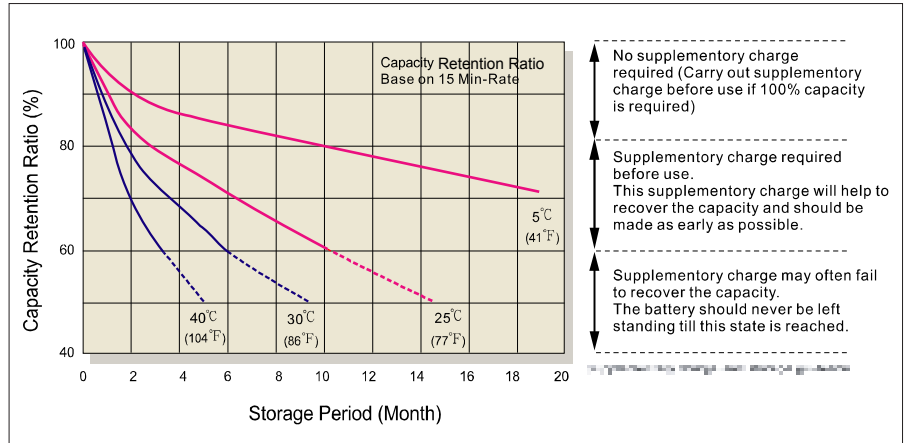
## Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

| F.V/Time | 15MIN | 30MIN | 60MIN | 90MIN | 2HR | 3HR | 4HR | 5HR | 6HR | 7HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|------|------|
| 1.67V    | 2461  | 1590  | 946   | 695   | 557 | 414 | 335 | 279 | 238 | 208 | 184 | 150  | 78.9 |
| 1.70V    | 2344  | 1542  | 936   | 693   | 556 | 413 | 333 | 277 | 237 | 207 | 182 | 149  | 78.7 |
| 1.75V    | 2138  | 1456  | 910   | 681   | 555 | 407 | 328 | 270 | 231 | 202 | 180 | 148  | 77.9 |
| 1.80V    | 1927  | 1364  | 876   | 665   | 549 | 400 | 317 | 265 | 228 | 198 | 176 | 145  | 77.0 |
| 1.83V    | 1797  | 1304  | 844   | 649   | 538 | 389 | 310 | 259 | 224 | 194 | 172 | 142  | 75.8 |
| 1.85V    | 1705  | 1255  | 822   | 633   | 529 | 382 | 306 | 254 | 219 | 192 | 170 | 141  | 74.3 |
| 1.90V    | 1510  | 1142  | 757   | 581   | 477 | 353 | 281 | 234 | 200 | 176 | 158 | 131  | 69.6 |

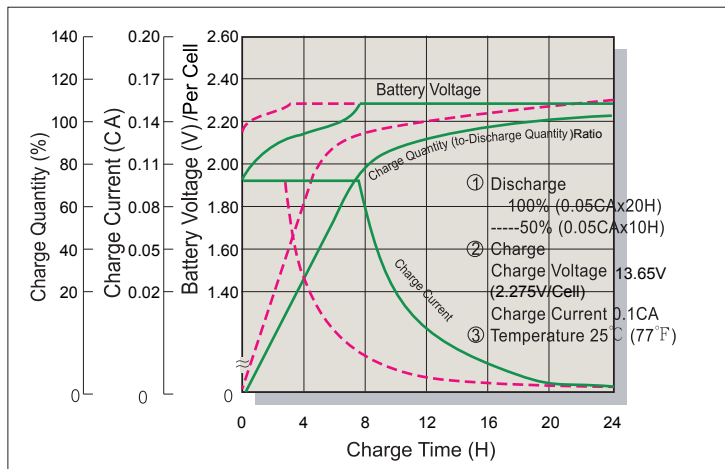
### Trickle (or Float) Service Life



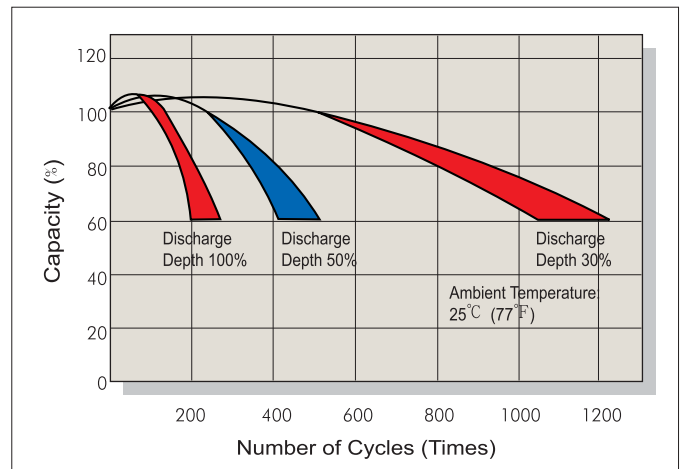
### Capacity Retention Characteristic



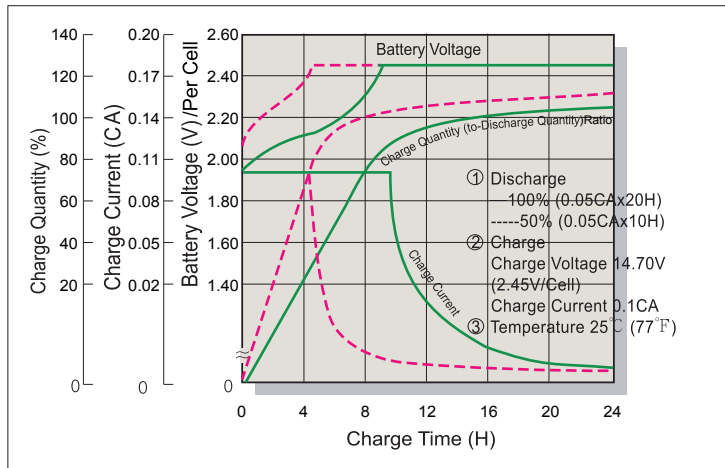
### Battery Voltage and Charge Time for Standby Use



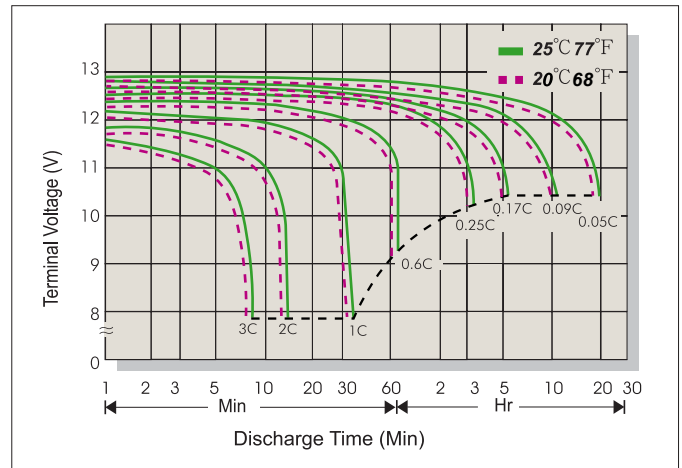
### Cycle Service Life



### 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 |

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

**GLOBAL HQ**  
**CSB BATTERY CO., LTD. (TAIWAN)**  
 Tel : +886-2-2555-5600  
 Fax : +886-2-2555-3300  
 mail : service@csb-battery.com.tw

**BEIJING OFFICE. (CHINA)**  
**CSB BATTERY TECHNOLOGIES (BEIJING) CO., LTD.**  
 Tel : +86-10-59621300/1301/1302/1303  
 Fax : +86-10-59621304  
 mail : chinasl@csb-battery.com

**AMERICA HQ**  
**CSB BATTERY TECHNOLOGIES INC. (U.S.A)**  
 Tel : +1-817-244-7777/1-(800)3-CSB-USA(272872)  
 Fax : +1-817-244-4445  
 mail : csb@csb-battery.com

**SHANGHAI OFFICE. (CHINA)**  
**CSB BATTERY LOGISTIC (SHANGHAI) CO., LTD.**  
 Tel : +86-21-5046-1622/5046-0833  
 Fax : +86-21-5064-3314  
 mail : chinasl@csb-battery.com

**EUROPE HQ**  
**CSB Battery Europe BV.**  
 Tel : +31(0)-180-418-140  
 Fax : +31(0)-180-418-327  
 mail : eurosales@csb-battery.eu

**SHENZHEN OFFICE. (CHINA)**  
**CSB BATTERY LOGISTIC (SHANGHAI) CO., LTD.**  
 Tel : +86-755-8831-6488/6396/6356  
 Fax : +86-755-8831-6548  
 mail : she@csb-battery.com.cn