



# TPL 12800

## 12V 80Ah

TPL12800 is a general purpose 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.

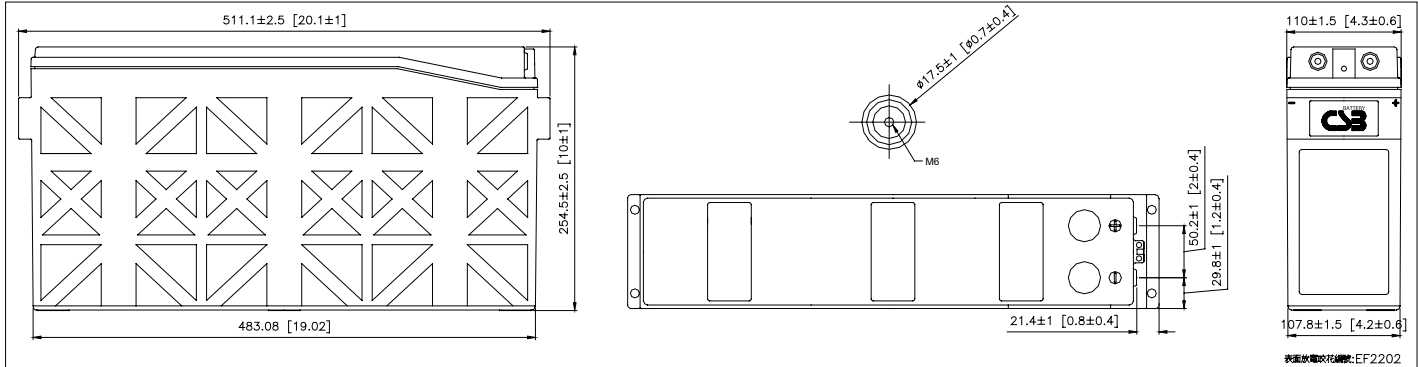
### Specification

|  |  |
|--|--|
| Nominal Voltage(V)   | 12   |
| Capacity $25^{\circ}\text{C}$ (77°F)                       | 80Ah @ 8hr-rate to 1.75V per cell                              |
| Dimensions (mm)  | Height : 254.5 mm(10.02 inch)                                  |
|  | Length : 511.1 mm(20.12 inch)                                  |
|  | Width : 110 mm(4.33 inch)                                      |
| Weight   | Approx. 36kg(79.2 lbs)   |
| Internal Resistance. Approx (mΩ)                           | Approx. 4.5mΩ  |
| FlameRetardantContainer/<br>Cover UL - Laboratories Rating | PPE(UL 94-V0/File E161759)/L.O.I higher than 28 .              |
| Float Charging $25^{\circ}\text{C}$ (77°F)                 | 2.275±0.025V/cell Temperature coefficient -3.3mV/°C (1.8mV/°F) |
| Maximum Discharge Current in 5 seconds                     | 800A   |
| Maximum Charge Current(C/5)                                | 24A  |
| Service Temperature Range                                  | Discharge: -20°C~50°C (-4°F~122°F)                             |
|  | Charge: -20°C~50°C (-4°F~122°F)                                |
|  | Storage: -20°C~40°C (-4°F~104°F)                               |
| Terminal Type  | I2-Thread lead alloy recessed terminal to accept M6 bolt       |
| Terminal Hardware Initial Torque                           | 110-in-lbs.(12.4 N-m)  |



CSB-manufactured batteries are UL-recognized components under UL924 and UL 1989. CSB is also certified by ISO 9001 and ISO 14001.

### Dimensions



### TPL12800

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

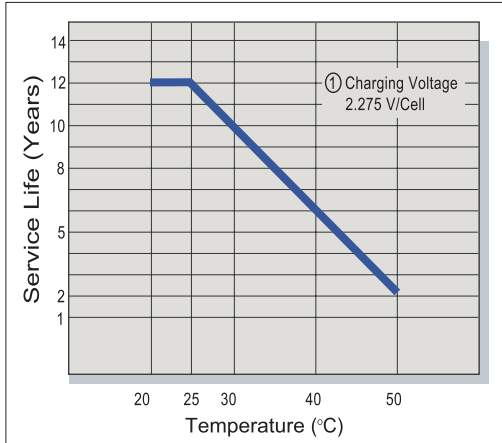
| F.V/Time | 15MIN | 30MIN | 1HR  | 2HR  | 3HR  | 4HR  | 5HR  | 6HR  | 7HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 1.67V    | 148   | 94.3  | 55.3 | 32.1 | 23.7 | 19.1 | 15.8 | 13.5 | 11.8 | 10.4 | 8.50 | 4.45 |
| 1.70V    | 140   | 90.8  | 53.6 | 31.5 | 23.4 | 18.8 | 15.6 | 13.3 | 11.6 | 10.2 | 8.40 | 4.40 |
| 1.75V    | 126   | 84.0  | 51.1 | 30.3 | 22.8 | 18.3 | 15.0 | 12.8 | 11.2 | 10.0 | 8.20 | 4.30 |
| 1.80V    | 111   | 77.1  | 48.3 | 29.0 | 22.1 | 17.4 | 14.5 | 12.5 | 10.9 | 9.65 | 8.00 | 4.20 |
| 1.83V    | 103   | 72.8  | 46.3 | 28.2 | 21.3 | 16.9 | 14.1 | 12.2 | 10.6 | 9.35 | 7.70 | 4.10 |
| 1.85V    | 97.3  | 70.3  | 44.8 | 27.5 | 20.8 | 16.6 | 13.8 | 11.9 | 10.4 | 9.20 | 7.60 | 4.00 |
| 1.90V    | 84.1  | 62.9  | 41.2 | 25.7 | 18.9 | 15.0 | 12.5 | 10.7 | 9.40 | 8.40 | 6.95 | 3.70 |

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

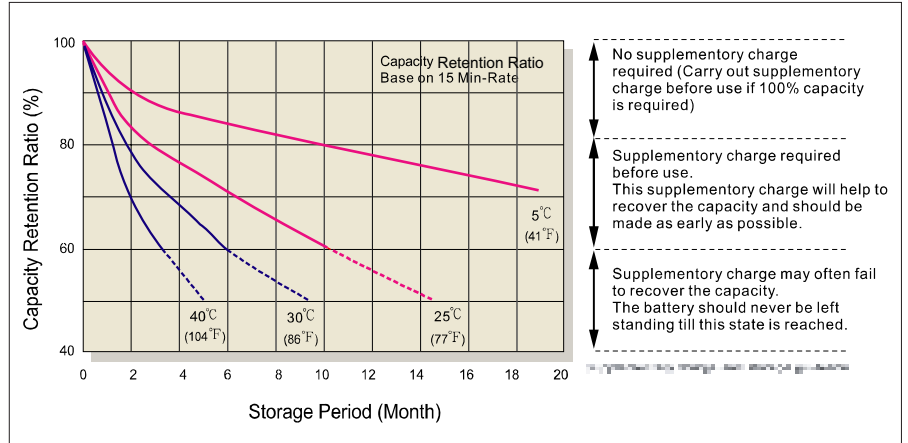
| F.V/Time | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 6HR | 7HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 1.67V    | 1,575 | 1,018 | 606 | 357 | 265 | 214 | 178 | 152 | 133 | 118 | 96.2 | 50.5 |
| 1.70V    | 1,523 | 995   | 597 | 353 | 263 | 213 | 177 | 151 | 132 | 116 | 95.8 | 50.3 |
| 1.75V    | 1,405 | 946   | 582 | 345 | 261 | 210 | 173 | 149 | 129 | 115 | 94.8 | 49.8 |
| 1.80V    | 1,264 | 883   | 556 | 335 | 254 | 203 | 169 | 146 | 127 | 113 | 93.1 | 49.3 |
| 1.83V    | 1,174 | 839   | 539 | 327 | 249 | 199 | 166 | 143 | 124 | 111 | 91.7 | 48.5 |
| 1.85V    | 1,110 | 808   | 525 | 321 | 245 | 196 | 163 | 140 | 123 | 109 | 90.2 | 47.6 |
| 1.90V    | 967   | 731   | 485 | 305 | 226 | 180 | 150 | 128 | 113 | 101 | 83.5 | 44.5 |

• All mentioned values are average values.

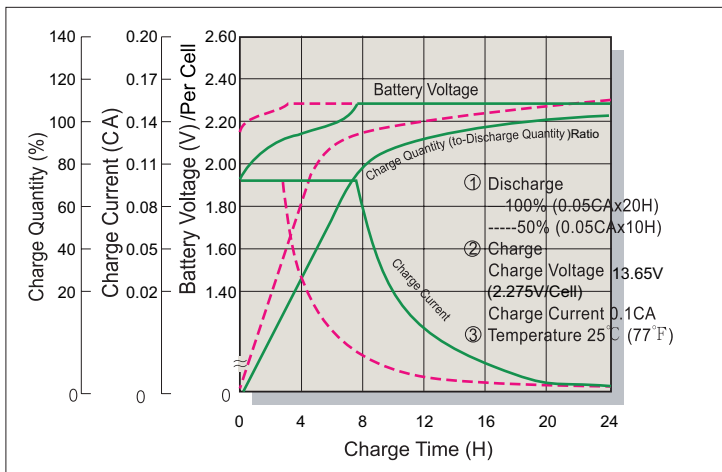
### Trickle (or Float) Service Life



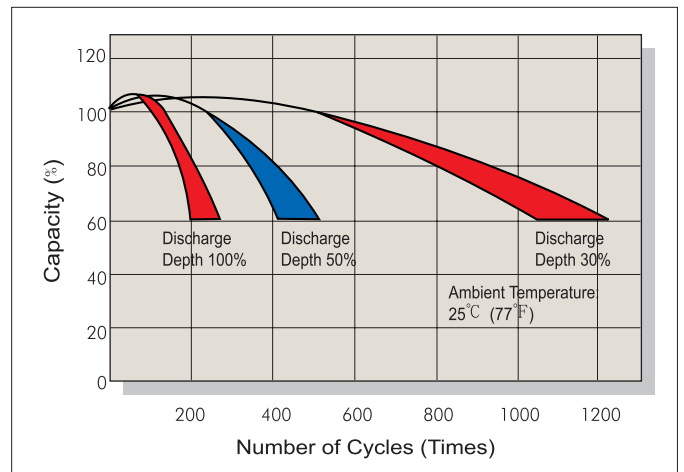
### Capacity Retention Characteristic



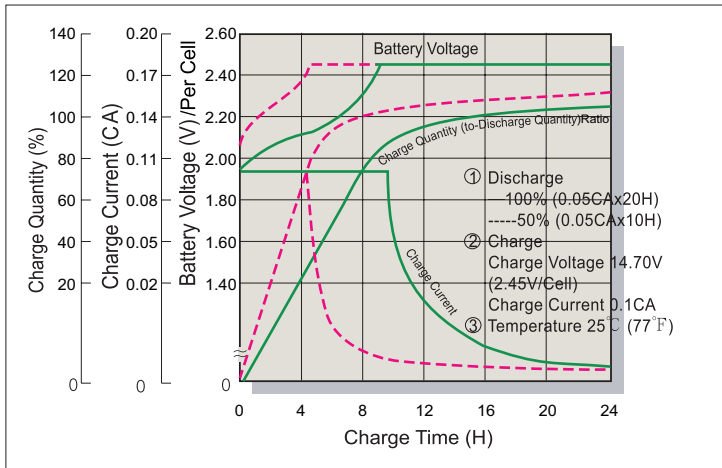
### Battery Voltage and Charge Time for Standby Use



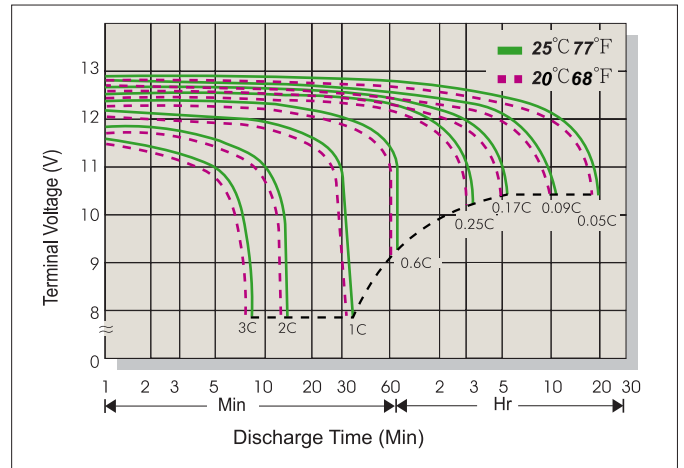
### Cycle Service Life



### 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 |

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