

Powered by



GP 12650 ▶ 12V 65Ah

GP 12650 is a general purpose battery up to 5 years in standby service or more than 260 cycles at 100% discharge in cycle service. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



► Specification

| | |
|--|--|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Capacity | 65A h @ 20hr-rate to 1.75V per cell @25 °C(77°F) |
| Weight | Approx. 20 kg(44.09 lbs) |
| Maximum Discharge Current | 500A(5sec) |
| Internal Resistance | Approx. 8 m Ω |
| Operating Temperature Range | Discharge: -15°C~50°C(5°F~122°F) Charge: -15 °C~40°C(5°F~104°F) 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 | 19.50A |
| 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 | B4-L terminal to accept M6 nut & bolt |
| Container Material | Polypropylene(UL 94-V0/File E50955)*Flammability resistance of (UL 94-HB/File E216959) can be available upon request. |

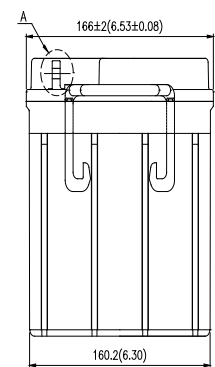
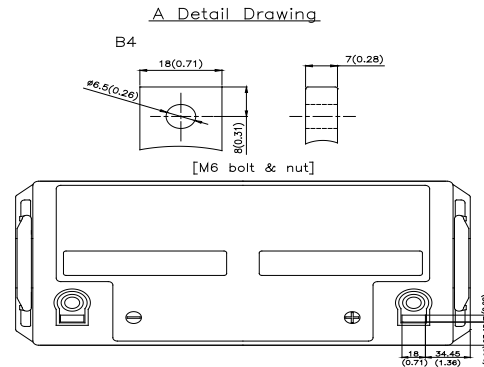
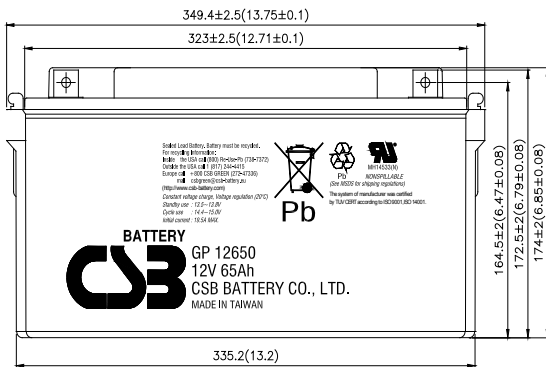


CSB-manufactured VRLA batteries are UL-recognized components under UL924 and UL1989.

CSB is also certified by ISO 9001 and ISO 14001.

► Dimensions :

| Overall Height (H) | Container height (h) | Length (L) | Width (W) | |
|--------------------|----------------------|---------------------|-----------------------|-------------------|
| Unit: mm (inch) | 174±2 (6.85±0.08) | 172.5±2 (6.79±0.08) | 349.9±2.5 (13.75±0.1) | 166±2 (6.53±0.08) |



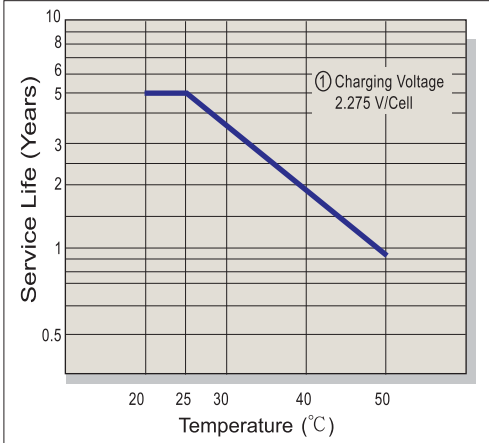
Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.60V | 271 | 173 | 132 | 79.9 | 47.2 | 27.3 | 19.4 | 15.1 | 12.4 | 8.08 | 6.58 | 3.57 |
| 1.67V | 242 | 162 | 124 | 78.3 | 46.9 | 27.2 | 19.3 | 15.0 | 12.3 | 7.98 | 6.48 | 3.42 |
| 1.70V | 229 | 157 | 121 | 77.3 | 46.7 | 27.1 | 19.2 | 14.9 | 12.2 | 7.93 | 6.43 | 3.36 |
| 1.75V | 208 | 147 | 117 | 75.4 | 46.4 | 27.0 | 19.1 | 14.8 | 12.1 | 7.86 | 6.32 | 3.25 |
| 1.80V | 186 | 137 | 111 | 73.4 | 45.9 | 26.9 | 19.0 | 14.7 | 12.0 | 7.76 | 6.21 | 3.14 |
| 1.85V | 164 | 127 | 105 | 71.3 | 45.4 | 26.8 | 18.9 | 14.6 | 11.9 | 7.66 | 6.10 | 3.03 |

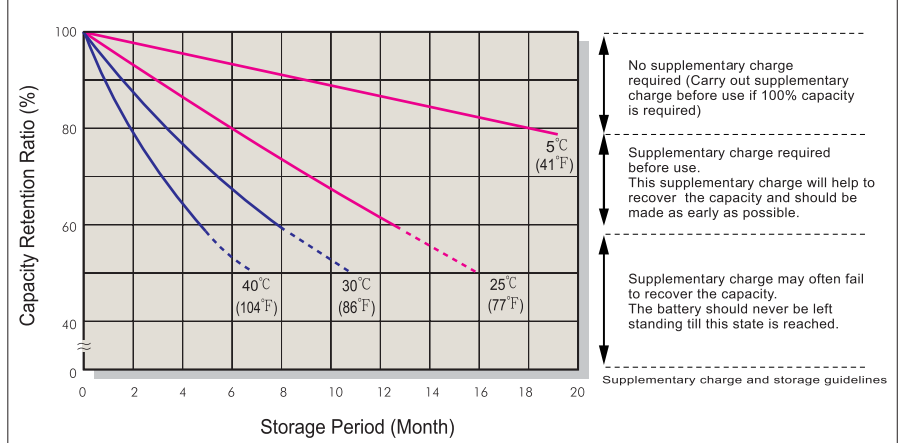
Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|-------|-----|-----|-----|-----|-----|------|------|------|
| 1.60V | 3,250 | 2,080 | 1,580 | 959 | 566 | 327 | 232 | 181 | 148 | 97.0 | 79.0 | 40.9 |
| 1.67V | 2,900 | 1,940 | 1,503 | 935 | 562 | 326 | 231 | 180 | 147 | 96.0 | 77.7 | 39.2 |
| 1.70V | 2,750 | 1,871 | 1,460 | 924 | 560 | 325 | 230 | 179 | 146 | 95.5 | 77.1 | 38.4 |
| 1.75V | 2,490 | 1,760 | 1,400 | 903 | 555 | 324 | 229 | 178 | 145 | 94.3 | 75.8 | 37.1 |
| 1.80V | 2,230 | 1,640 | 1,330 | 881 | 550 | 323 | 228 | 177 | 144 | 93.1 | 74.5 | 35.7 |
| 1.85V | 1,970 | 1,520 | 1,260 | 856 | 545 | 322 | 227 | 176 | 143 | 91.9 | 73.2 | 34.4 |

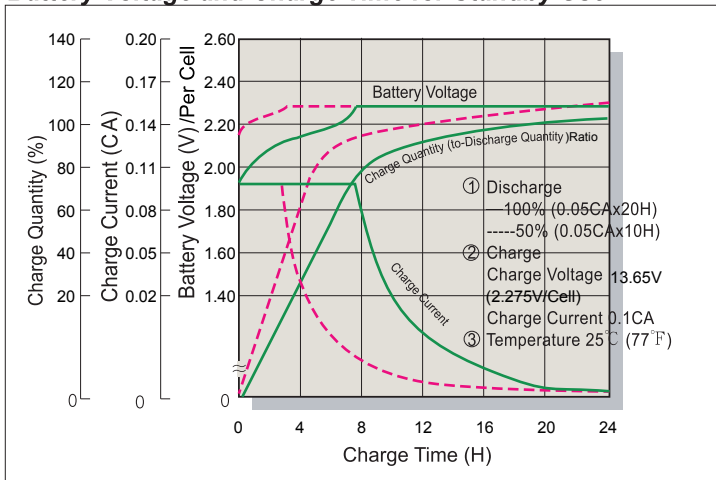
Trickle (or Float) Service Life



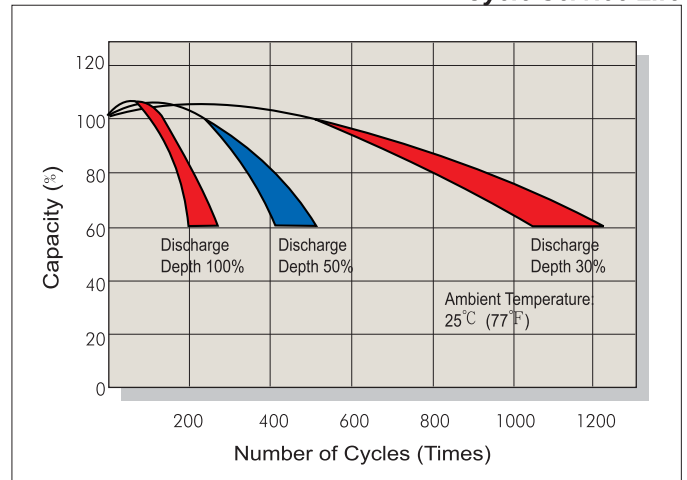
Capacity Retention Characteristic



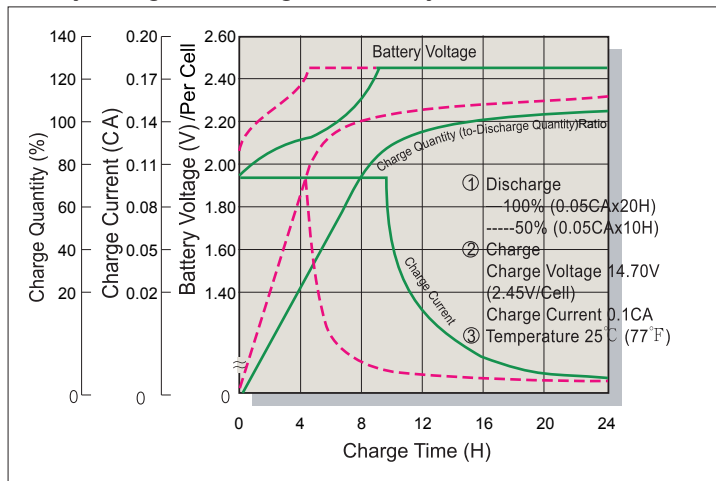
Battery Voltage and Charge Time for Standby Use



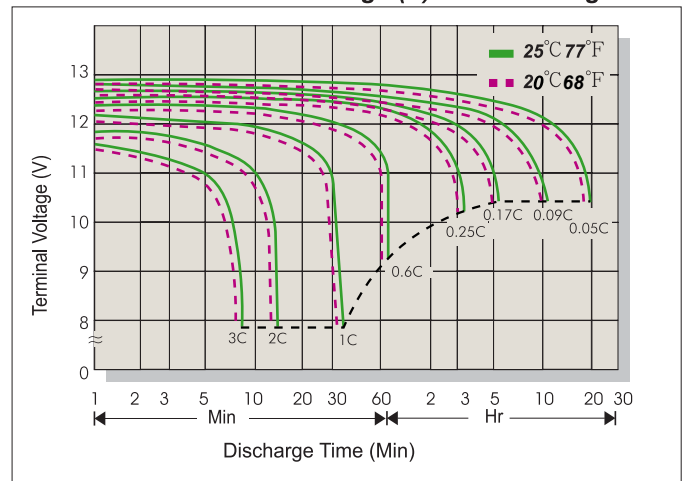
Cycle Service Life



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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