

Absorbent Glass Mat (AGM) technology for superior performance. Valve regulated, spill proof construction allows safe operation in any position. Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified. U.L. recognized under file number MH 20567.

Maintenance-Free

Specification

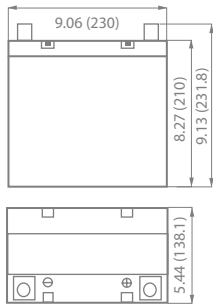
| | | | |
|---|----------------------------------|--------------|---------------|
| Nominal Voltage | 12 volts | | |
| Nominal Capacity | 77° F (25° C) | | |
| 20-hr. (2.75A) | 55.0 Ah | | |
| 10-hr. (5.12A) | 51.2 Ah | | |
| 5-hr. (9.36A) | 46.8 Ah | | |
| 1-hr. (33.0A) | 33.0 Ah | | |
| Approximate Weight | 38.6 lbs (17.5 kgs) | | |
| Internal Resistance (approx.) | 10mΩ | | |
| Shelf Life (% of normal capacity at 68° F (25° C)) | | | |
| 3 Months | 6 Months | 12 Months | |
| 91% | 83% | 64% | |
| Temperature Dependency of Capacity | (20 hour rate) | | |
| 104° F (40° C) | 77° F (25° C) | 32° F (0° C) | 5° F (-15° C) |
| 102% | 100% | 85% | 65% |
| AGM Operational Temperature | | | |
| Charge | 32° F to 104° F (0° C to 40° C) | | |
| Discharge | 5° F to 113° F (-15° C to 45° C) | | |
| AGM Storage Temperature | 5° F to 104° F (-15° C to 40° C) | | |



Due to continuous improvements to our products, product may vary slightly from depiction.

| | |
|---|-------------------|
| Charge Method (Constant Voltage) | |
| Cycle Use (Repeating Use) | |
| Initial Current | 16.5 A or smaller |
| Control Voltage | 14.6 - 14.8 V |
| Float Use | |
| Control Voltage | 13.6 - 13.8 V |

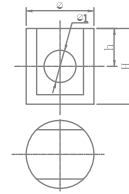
Physical Dimensions: in (mm)



L: 9.06 in (230 mm)
W: 5.44 in (138.1 mm)
H: 8.27 in (210 mm)
TH: 9.13 in (231.8 mm)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

Terminals



Z Series (Z Post Terminal)

| Dimension Type | ∅ | ∅1 | H | h |
|----------------|------|-----|------|-----|
| Z1 | 17.0 | 8.0 | 21.5 | 9.0 |

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 |
|----------|-------|-------|-------|-------|------|------|------|-----|-----|-----|------|------|
| 9.60V | 182.8 | 133.4 | 93.9 | 56.8 | 29.6 | 17.3 | 12.7 | 9.9 | 8.2 | 5.7 | 5.2 | 2.8 |
| 10.20V | 161.0 | 121.5 | 84.0 | 53.8 | 27.9 | 16.5 | 12.4 | 9.6 | 8.0 | 5.6 | 5.0 | 2.7 |
| 10.50V | 155.1 | 115.6 | 79.0 | 52.4 | 27.2 | 16.1 | 12.1 | 9.5 | 7.9 | 5.6 | 4.9 | 2.7 |
| 10.80V | 149.2 | 109.7 | 74.1 | 50.9 | 26.2 | 15.7 | 11.8 | 9.3 | 7.7 | 5.4 | 4.9 | 2.7 |
| 11.10V | 143.3 | 103.7 | 69.2 | 49.4 | 25.2 | 15.3 | 11.4 | 9.0 | 7.5 | 5.3 | 4.7 | 2.5 |

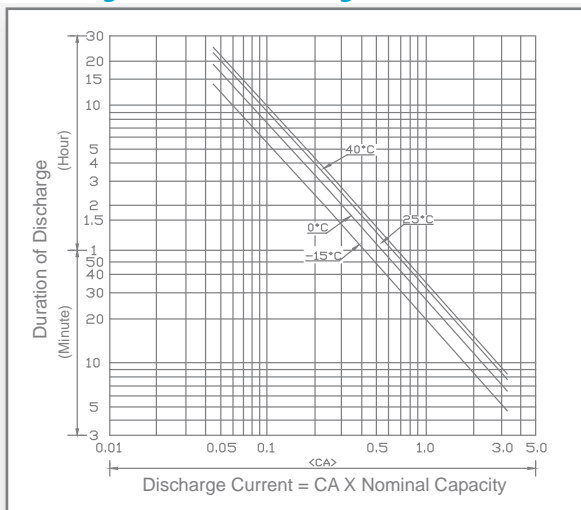
Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|--------|--------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 9.60V | 1940.9 | 1465.7 | 996.9 | 603.2 | 343.3 | 200.1 | 147.2 | 114.6 | 94.4 | 66.7 | 60.3 | 32.5 |
| 10.20V | 1787.8 | 1349.1 | 932.2 | 597.7 | 322.6 | 191.2 | 143.3 | 111.6 | 94.1 | 65.2 | 58.8 | 31.6 |
| 10.50V | 1759.1 | 1311.1 | 896.1 | 593.8 | 312.2 | 186.7 | 139.8 | 109.7 | 91.4 | 64.7 | 57.8 | 31.2 |
| 10.80V | 1736.4 | 1276.5 | 862.5 | 592.3 | 303.8 | 182.8 | 136.8 | 107.7 | 89.9 | 63.2 | 57.3 | 31.1 |
| 11.10V | 1704.8 | 1234.5 | 823.0 | 587.9 | 299.9 | 182.3 | 135.4 | 107.2 | 89.4 | 62.7 | 55.8 | 30.1 |

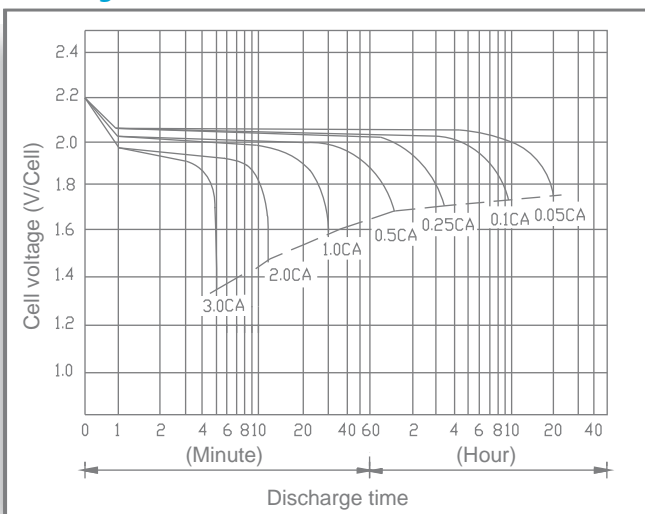


ISO 9001

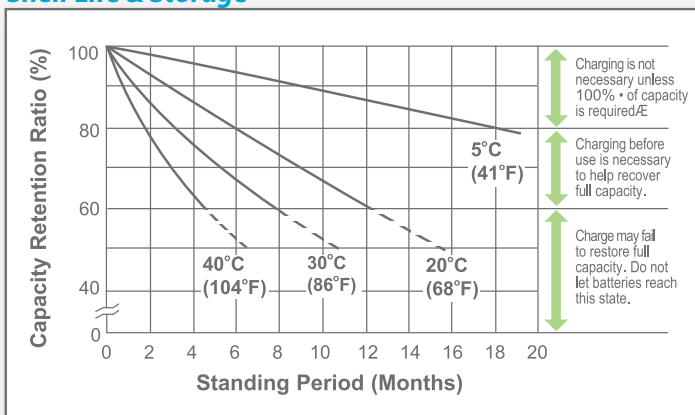
Discharge Time vs. Discharge Current



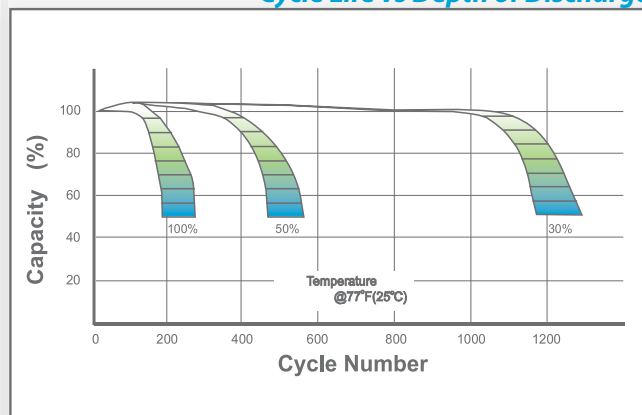
Discharge Characteristics



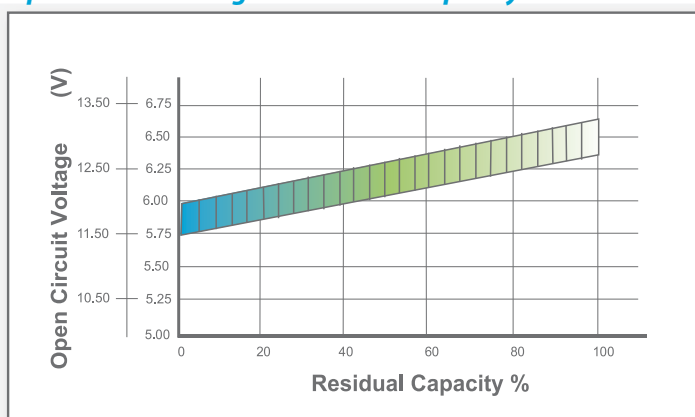
Shelf Life & Storage



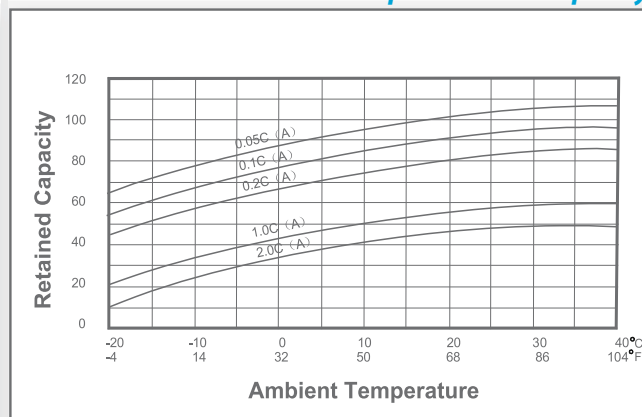
Cycle Life vs Depth of Discharge



Open Circuit Voltage vs Residual Capacity



Effect of Temperature on Capacity



Charge Current & Final Discharge Voltage

| Application | Charge Voltage(V/Cell) | | | Max.Charge Current | Final Discharge Voltage V/Cell | Discharge Current(A) | Final Discharge Voltage V/Cell | Discharge Current(A) | Final Discharge Voltage V/Cell | Discharge Current(A) |
|-------------|------------------------|-----------|-----------------|--------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|
| | Temperature | Set Point | Allowable Range | | | | | | | |
| Cycle Use | 25°C(77°F) | 2.45 | 2.43-2.47 | 0.30C | 1.75 | 0.2C>(A) | 1.70 | 0.2C<(A)<0.5C | 1.60 | 0.5C<(A)<1.0C |
| Standby | 25°C(77°F) | 2.28 | 2.27-2.30 | | 1.30 | (A)>1.0C | | | | |



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