

# GC-12 Series

Lead-Carbon Gel Battery

GC-12-100



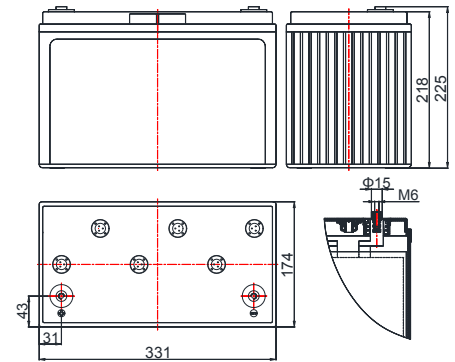
## Main Applications

- Renewable energy (wind & solar ) storage system
- UPS & emergency lighting system
- Military field, railway system, power system
- Fire alarm and security system
- Off-grid & bad-grid sites

## Benefits

- Design life is more than 12 years
- Superior deep cycling performance
- Lifetime maintenance free, Low annual operating cost, reduced TCO
- High security, reliability and stability

## Dimensions



## Technical Parameters

|  |  |
|--|--|
| Nominal Voltage                                    | 12 V   |
| Capacity   | 100 Ah @ 10hr to 1.80V per cell @ 25°C (77°F)  |
| Weight   | 30 kg (66.14 lbs)  |
| Dimensions   | Length: 331 mm<br>Width: 174 mm<br>Height: 218 mm<br>Total height: 225 mm                              |
| Internal Resistance (full charged)                 | Approx. 4.4 mΩ @ 25°C(77°F)  |
| Short- circuit Current                             | 620 A(5sec)  |
| Self Discharge @25°C(77°F)                         | Less than 4% after 30 days storage   |
| Operating Temperature Range                        | Discharge: -40°C~50°C(-40°F~122°F)<br>Charge: -20°C~45°C(-4°F~113°F)<br>Storage:-20°C~40°C(-4°F~104°F) |
| Recommended Operating Temperature                  | 15°C~25°C (59°F~77°F)  |
| Maximum Charging Current                           | 30 A   |
| Charging Voltage @25°C(77°F)                       | Float: 2.25 V/cell, Temps coefficient -3 mV/°C<br>Equalize: 2.35 V/cell                                |
| Terminal   | M6   |
| Container Materials                                | ABS/ABS V0 (Optional)  |
| Capacity Affected by Temperature(C <sub>10</sub> ) | 105% @ 40°C(104°F)<br>85% @ 0°C(32°F)<br>60% @ -20°C(-4°F)   |
| Design Life @25°C(77°F)                            | 12 years   |

## Attain Certificate

- ISO9001
- ISO14001
- ISO18001

## Technical Features

- Adopt lead- carbon gel technology
- Special gel electrolyte without flowing to avoid acid stratification and can prolong service life
- Excellent charging and discharging ability in low current
- High-purity electrolyte and special additives, low self-discharge

# GC-12 Series

Lead-Carbon Gel Battery

GC-12-100



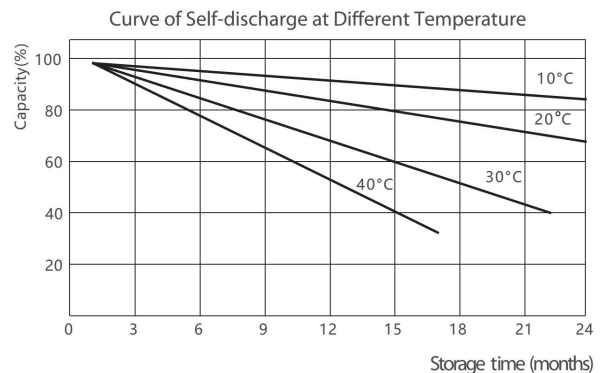
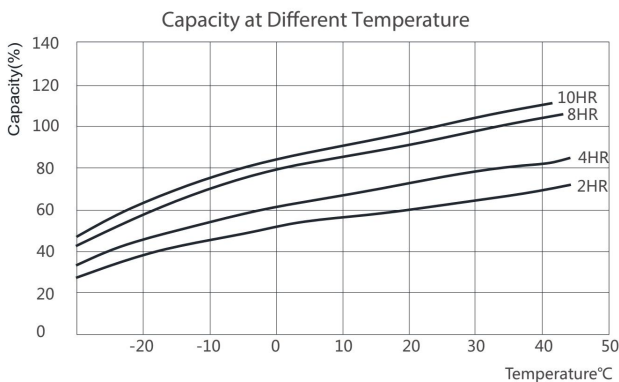
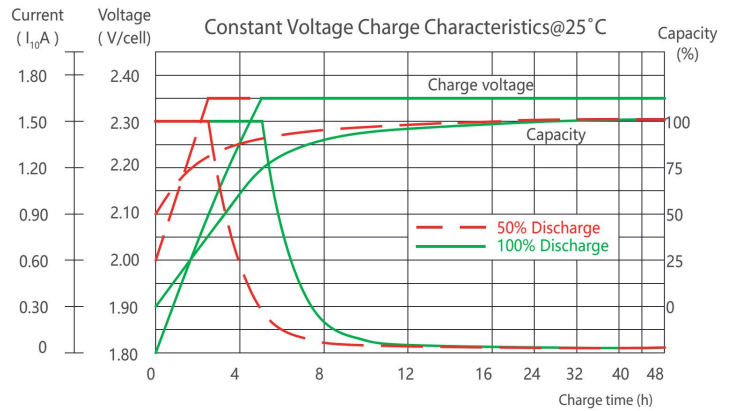
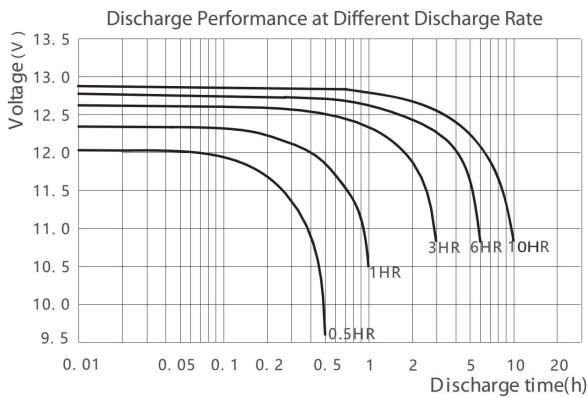
## Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1hr  | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 8hr  | 10hr | 20hr |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 177  | 145   | 129   | 111   | 82.9  | 61.8  | 53.7 | 32.2 | 24.0 | 19.3 | 16.2 | 14.3 | 11.5 | 9.8  | 5.16 |
| 1.80V/cell | 211  | 163   | 141   | 119   | 88.0  | 64.5  | 55.2 | 33.4 | 25.0 | 19.9 | 16.6 | 14.6 | 11.8 | 10.0 | 5.26 |
| 1.75V/cell | 228  | 173   | 147   | 125   | 92.4  | 67.2  | 57.2 | 34.5 | 25.5 | 20.3 | 17.0 | 14.9 | 12.0 | 10.2 | 5.33 |
| 1.70V/cell | 245  | 182   | 154   | 130   | 96.2  | 69.6  | 59.0 | 35.3 | 26.0 | 20.7 | 17.3 | 15.2 | 12.2 | 10.3 | 5.39 |
| 1.67V/cell | 254  | 186   | 157   | 133   | 100   | 71.7  | 60.5 | 36.1 | 26.5 | 21.0 | 17.5 | 15.4 | 12.3 | 10.4 | 5.44 |
| 1.60V/cell | 271  | 196   | 163   | 139   | 103   | 73.7  | 61.8 | 36.7 | 26.9 | 21.3 | 17.7 | 15.5 | 12.4 | 10.5 | 5.48 |

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

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1hr | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 8hr  | 10hr | 20hr |
|------------|------|-------|-------|-------|-------|-------|-----|------|------|------|------|------|------|------|------|
| 1.85V/cell | 333  | 274   | 244   | 210   | 159   | 119   | 104 | 63.4 | 47.5 | 38.3 | 32.3 | 28.5 | 23.1 | 19.7 | 10.4 |
| 1.80V/cell | 387  | 302   | 263   | 224   | 168   | 123   | 106 | 65.7 | 49.1 | 39.3 | 33.0 | 29.1 | 23.5 | 20.0 | 10.5 |
| 1.75V/cell | 414  | 318   | 276   | 234   | 175   | 128   | 110 | 67.5 | 50.0 | 40.1 | 33.6 | 29.6 | 23.9 | 20.2 | 10.6 |
| 1.70V/cell | 436  | 332   | 287   | 243   | 182   | 132   | 113 | 69.0 | 50.9 | 40.7 | 34.1 | 29.9 | 24.1 | 20.4 | 10.7 |
| 1.67V/cell | 447  | 337   | 290   | 248   | 187   | 136   | 115 | 70.2 | 51.7 | 41.3 | 34.5 | 30.3 | 24.4 | 20.5 | 10.8 |
| 1.60V/cell | 470  | 350   | 300   | 255   | 192   | 139   | 117 | 71.1 | 52.3 | 41.6 | 34.8 | 30.5 | 24.5 | 20.6 | 10.9 |

## Performance Curve



### \*Declaration:

This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Contact CHINASHOTO for the latest information.

Welcome to Visit : [www.chinashoto.com](http://www.chinashoto.com)