

High-Temp Long Life GEL Deep Cycle Battery

HTB12-100

HTB series uses the newly developed nano gel electrolyte with super-C additive plus heavy duty plates design inside. The HTB series has a long service life and can provide optimum and reliable service under extreme condition such as high temperature and frequent power failure, This series is highly suited for tropical area in outdoor applications such as Telecom BTS stations and Off-grid PV system.

12V
100Ah

GEL
Technology

Deep
Cycle



COMPLIED STANDARDS

IEC 60896-21/22 JIS C8704
IEC61427 BS6290 part4
GB/T 19638 CE/ISO

Applications

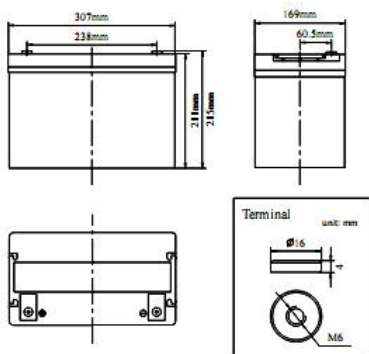
- BTS Stations
- Solar & Wind energy system
- UPS system
- Telecom systems
- Wheel chair, Golf Car

General Features

- ✓ Able to operate at 40-60°C
- ✓ DOD 50% 1500 times Cycles
- ✓ Integrated design to ensure the best Uniformity and reliability
- ✓ Long life and high stability under high temp. environment (no air-con needed)
- ✓ Use super-C additives: Deep discharge recovery capability

Dimensions & Weight

| | |
|------------------|---------|
| Length(mm) | 307±1 |
| Width(mm) | 169±1 |
| Height(mm) | 211±1 |
| Total Height(mm) | 215±1 |
| Weight(kg) | 29.6±3% |



Technical Specifications

| | | |
|--|---------------------------|--|
| Nominal Voltage | | 12V (6 cells per unit) |
| Design Floating Life @25°C | | 20 Years |
| Nominal Capacity @25°C (20 hour rate@5.0A,10.8V) | | 100Ah |
| Capacity @25°C | 10hour rate (9.0A,10.8V) | 90Ah |
| | 5 hour rate (15.9A,10.5V) | 79.5Ah |
| | 1 hour rate (55.6A,9.6V) | 55.6Ah |
| Internal Resistance | Full Charged Battery@25°C | ≤5.3mΩ |
| Ambient Temperature | Discharge | -25°C~60°C |
| | Charge | -25°C~60°C |
| | Storage | -25°C~60°C |
| Max.Discharge Current@25°C | | 540A(5s) |
| Capacity affected by Temperature (10 hour) | 40°C | 108% |
| | 25°C | 100% |
| | 0°C | 90% |
| | -15°C | 70% |
| Self-Discharge@25°C per Month | | 3% |
| Charge (Constant Voltage) @25°C | Standby Use | Initial Charging Current Less than 22.5A Voltage 13.6-13.8V |
| | Cycle Use | Initial Charging Current Less than 22.5A Voltage 14.4-14.9V |

Battery Discharge Table

Discharge Constant Current per Cell (Amperes at 25°C)

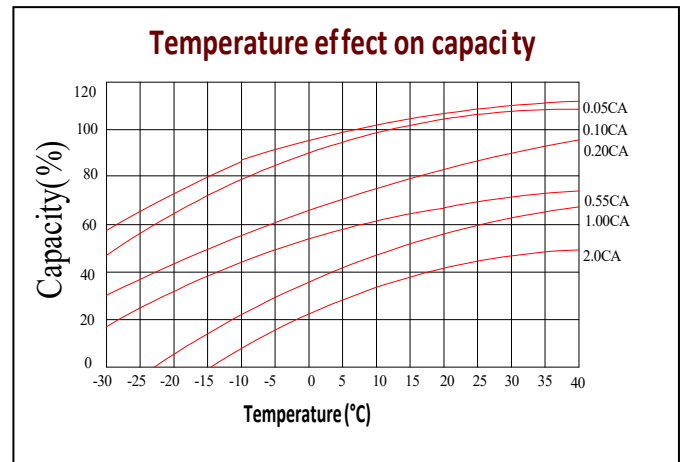
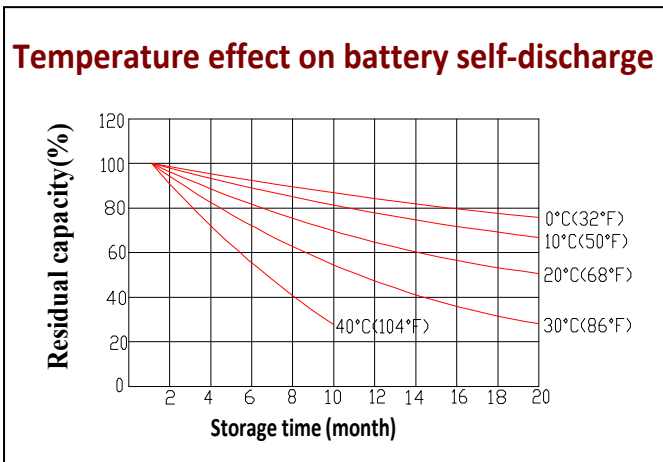
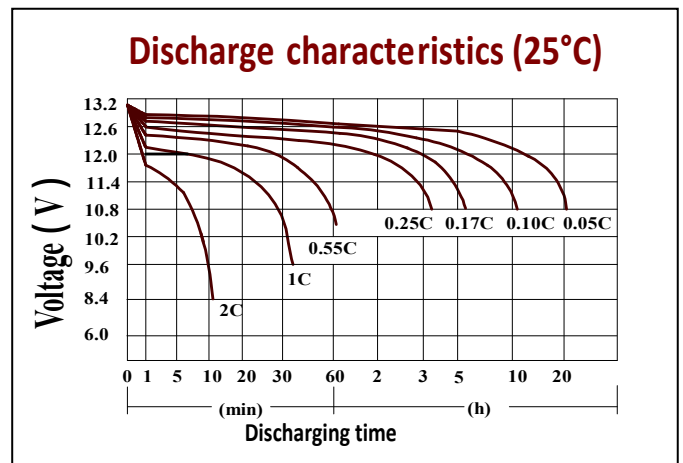
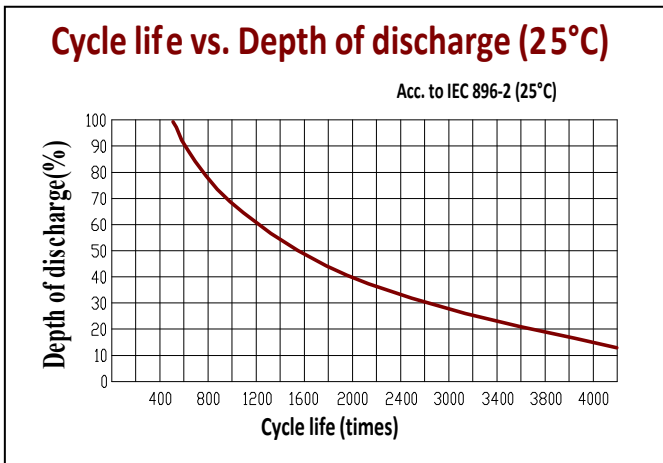
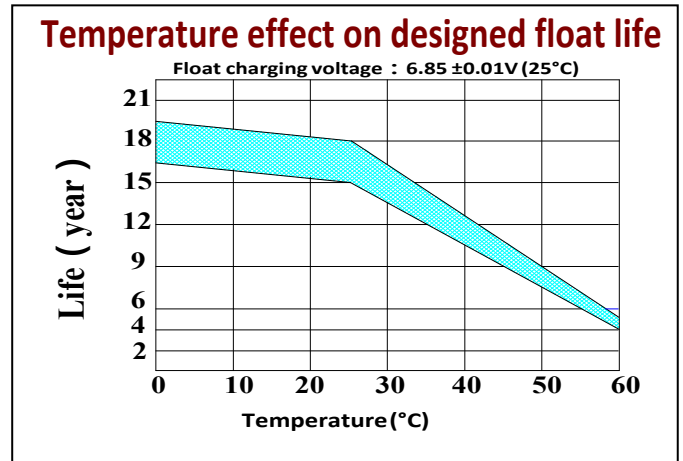
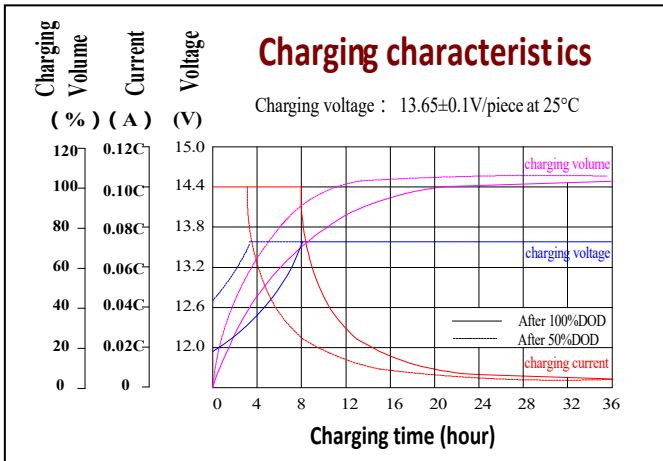
| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 8h | 10h | 20h | 100h |
|----------|-------|-------|-------|------|------|------|------|------|-----|-----|------|
| 1.60V | 128.7 | 82.0 | 60.5 | 55.6 | 35.3 | 24.8 | 16.8 | 11.1 | 9.9 | 5.4 | 1.20 |
| 1.65V | 126.4 | 80.5 | 59.4 | 54.5 | 34.6 | 24.3 | 16.5 | 10.9 | 9.7 | 5.3 | 1.18 |
| 1.70V | 124.0 | 79.0 | 58.3 | 53.5 | 34.0 | 23.9 | 16.2 | 10.7 | 9.5 | 5.2 | 1.15 |
| 1.75V | 121.7 | 77.5 | 57.2 | 52.5 | 33.3 | 23.4 | 15.9 | 10.5 | 9.4 | 5.1 | 1.13 |
| 1.80V | 117.0 | 74.5 | 55.0 | 50.5 | 32.1 | 22.5 | 15.3 | 10.1 | 9.0 | 5.0 | 1.11 |

Discharge Constant Power per Cell (Watts at 25°C)

| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 8h | 10h | 20h | 100h |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 1.60V | 247.7 | 157.8 | 116.5 | 106.9 | 67.9 | 47.6 | 32.4 | 21.4 | 19.1 | 10.4 | 2.31 |
| 1.65V | 243.2 | 154.9 | 114.3 | 105.0 | 66.6 | 46.8 | 31.8 | 21.0 | 18.7 | 10.2 | 2.26 |
| 1.70V | 238.7 | 152.0 | 112.2 | 103.0 | 65.4 | 45.9 | 31.2 | 20.6 | 18.4 | 10.0 | 2.22 |
| 1.75V | 234.2 | 149.1 | 110.1 | 101.1 | 64.2 | 45.0 | 30.6 | 20.2 | 18.0 | 9.8 | 2.18 |
| 1.80V | 225.2 | 143.4 | 105.9 | 97.2 | 61.7 | 43.3 | 29.5 | 19.4 | 17.3 | 9.6 | 2.14 |

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **CSBattery** for the latest information.

Performance Characteristics



Battery Construction

| Component | Positive plate | Negative plate | Container & Cover | Safety valve | Terminal | Separator | Electrolyte | Pillar seal |
|-----------|--|---|---------------------------------------|--------------------------------------|-------------------------|---|-------------|-----------------------------|
| Features | Thick high Sn low Ca grid with special paste | Balanced Pb-Ca grid for improved recombination efficiency | Fire resistant ABS (UL94-V0 optional) | Flame Si-Rubber and aging resistance | Female Copper Insert M8 | Advanced PVC /AGM separator for high pressure cell design | Silicon Gel | Two layers epoxy resin seal |