# 100AH GENERAL PURPOSE GEL VRLA BATTERY

## GENERAL FEATURES

- Environmentally friendly
- Wide operating temperature range
- Nano gel electrolyte and long floating service Life
- Can be used at vertical or horizontal orientation
- High power density
- Low self discharge

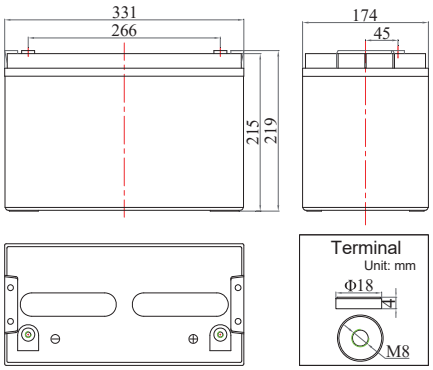
## APPLICATIONS

- Telecom Control Equipment
- UPS systems
- Communication Equipment
- Medical Equipment
- Emergency Power Systems
- Security Systems
- Railway Systems


SYSCG12-100

## DIMENSIONS & WEIGHT

| | |
|---|---|
| Length(mm) | 331±1 |
| Width(mm) | 176±1 |
| Height(mm) | 215±1 |
| Total Height(mm) | 219±1 |
| Weight(kg) | 29.2±3% |




### COMPLIED STANDARDS

| | |
|---|---|
| IEC 60896-21/22 | JIS C8704 |
| YD/T1360 | BS6290 part4 |
| GB/T 19638 | UL 1989 |

## TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Nominal Voltage** | | **12V(6 cells per unit)** |
| **Design Floating Life @25°C** | | **12 Years** |
| **Nominal Capacity @25°C (10 hour rate@10.00A,10.80V)** | | **100Ah** |
| **Capacity @25°C** | **20 hour rate (5.35A,10.5V)** | **107.0Ah** |
| | **5 hour rate (17.6A,10.5V)** | **88.0Ah** |
| | **1 hour rate (63.8A,9.6V)** | **63.8Ah** |
| **Internal Resistance** | **Full Charged Battery@25°C** | **≤5.5mΩ** |
| **Ambient Temperature** | **Discharge** | **-30°C ~ 60°C** |
| | **Charge** | **-30°C ~ 60°C** |
| | **Storage** | **-30°C ~ 60°C** |
| **Max.Discharge Current@25°C** | | **900A(5s)** |
| **Capacity affected by Temperature (10 hr Capacity )** | **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 25A Voltage 13.6-13.8V** |
| | **Cycle Use** | **Initial Charging Current Less than 25A 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 | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 180.5 | 106.3 | 80.5 | 63.8 | 37.5 | 27.6 | 18.6 | 16.2 | 12.7 | 10.5 | 5.55 |
| 1.67V | 170.5 | 100.7 | 77.4 | 61.9 | 36.3 | 26.7 | 18.3 | 15.9 | 12.6 | 10.3 | 5.50 |
| 1.70V | 160.1 | 97.8 | 74.6 | 59.5 | 35.3 | 26.0 | 17.9 | 15.6 | 12.4 | 10.2 | 5.42 |
| 1.75V | 150.0 | 93.5 | 71.3 | 57.1 | 34.4 | 25.4 | 17.6 | 15.3 | 12.2 | 10.1 | 5.35 |
| 1.80V | 140.7 | 90.1 | 68.7 | 55.1 | 33.1 | 24.6 | 17.2 | 15.0 | 12.0 | 10.0 | 5.30 |

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

| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 345.1 | 211.1 | 152.9 | 122.4 | 71.1 | 52.7 | 35.9 | 31.3 | 24.8 | 20.5 | 11.0 |
| 1.67V | 330.2 | 197.9 | 147.7 | 119.1 | 69.2 | 51.3 | 35.3 | 30.8 | 24.6 | 20.3 | 10.9 |
| 1.70V | 307.7 | 193.6 | 143.0 | 115.0 | 67.6 | 50.1 | 34.8 | 30.4 | 24.3 | 20.1 | 10.7 |
| 1.75V | 288.7 | 184.3 | 137.3 | 110.8 | 66.0 | 49.1 | 34.3 | 29.9 | 24.0 | 19.9 | 10.7 |
| 1.80V | 271.0 | 176.8 | 132.7 | 107.2 | 63.8 | 47.7 | 33.6 | 29.4 | 23.7 | 19.8 | 10.6 |

**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.

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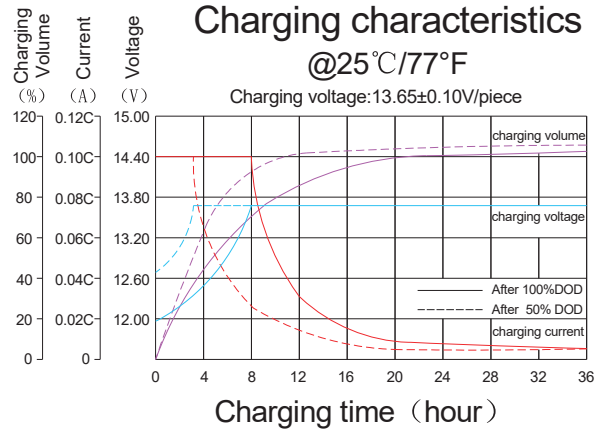
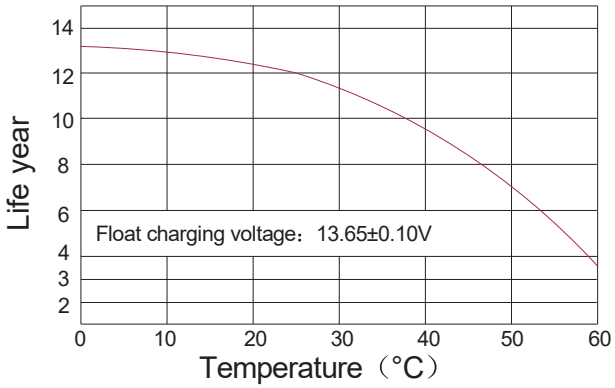
## PERFORMANCE CHARACTERISTICS

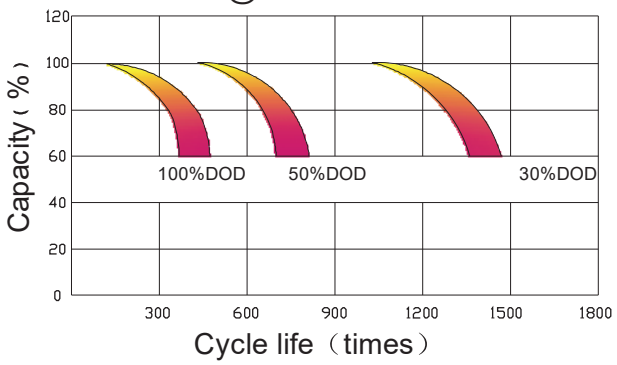
### Charging characteristics @25℃/77°F



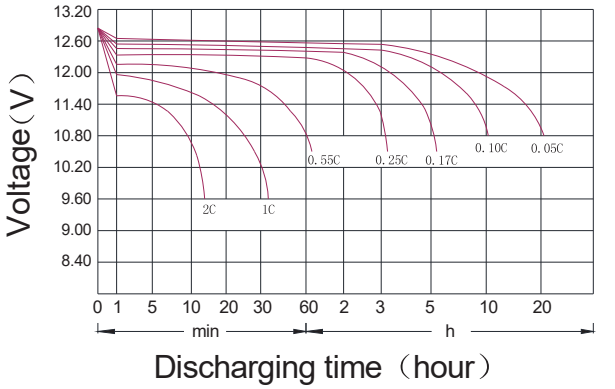

### Temperature effect on Design Service life



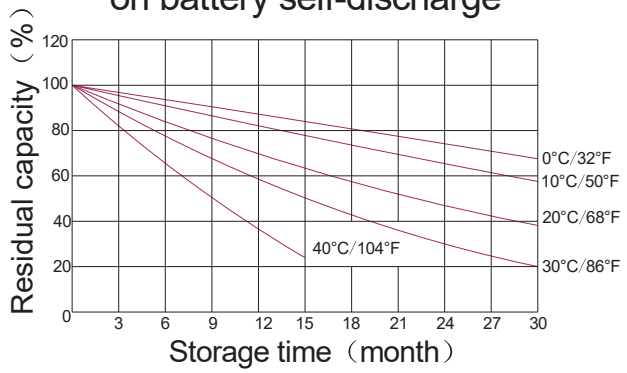

### Cycle life vs.Depth of discharge @25°C/77°F



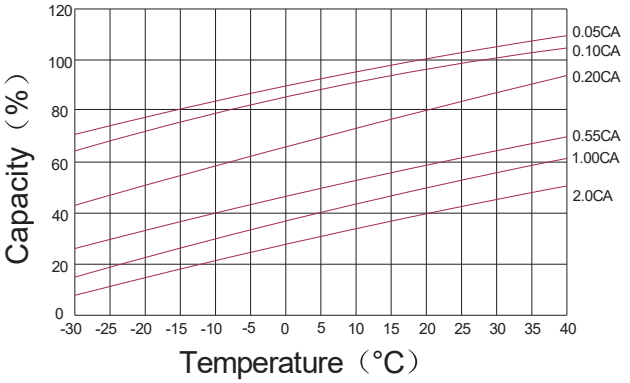

### Discharge characteristics(@25℃/77°F)




### Temperature effect on battery self-discharge




### Temperature effect on capacity




## 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 | ABS (UL94-V0 optional) | Flame Si-Rubber and aging resistance | Female Copper Insert M8(torque:7 ~9N.m) | Advanced AGM separator for high pressure cell design | Dilute high purity sulphuric acid | Two layers epoxy resin seal |

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