# USG2-1000(2V1000AH)

## Applications

- *Telecom application (indoor or outdoor BTS)*
- *Solar System*
- *Wind system*
- *Hybrid solution*

## Design

- *Positive plate: flat plate and grid-plate in PbCaSn-alloy*
- *Negative plate: flat plate and grid-plate in PbCaSn-alloy with long life expander material*
- *Electrolyte: sulphuric acid, fixed as GEL by fumed silica*
- *Separator: high quality microporous separator*
- *Safety valve: valve with flame arrestor*

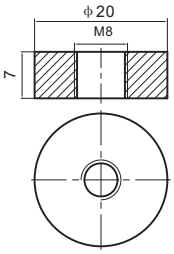
## Features

- *Long life: 16 years design life*
- *Good deep discharge resilience performance*
- *Special plate design, long cycle lifetime*
- *High thermal capacity, reduce the risk of thermal out of control and drying hard, can be used in bad enviroment*
- *Flame retardant container UL94-V0*

### Terminal

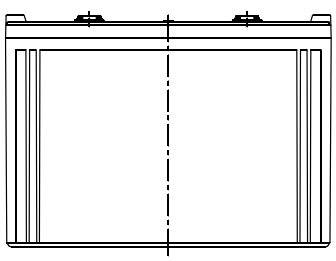
Terminal Model: T11

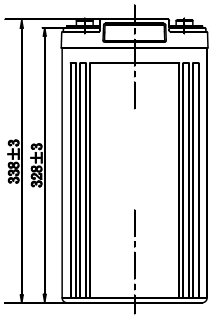
Unit: mm

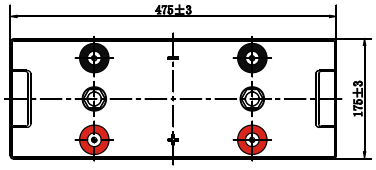



### Layout

Unit: mm





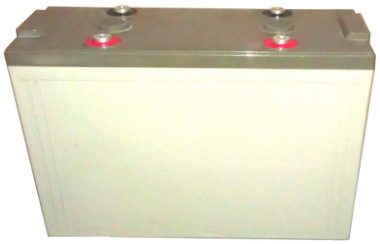
UPLUS
NEW TECHNOLOGY BATTERY

■ Telecom Battery
□ UPS Battery
■ Renewable Energy Battery

# General Purpose GEL Battery-USG Series

## Specification

| | | |
|---|---|---|
| Nominal Voltage | 2V | |
| Rated Capacity (Ah) | 1000.0 AH/100.0A | (10hr,1.80V/cell,25°C) |
| | 762.3 AH/254.1A | (3hr,1.75V/cell,25°C) |
| | 634.8 AH/634.8 A | (1hr,1.60V/cell,25°C) |
| Dimension | Length | 475±2mm |
| | Width | 175±2mm |
| | Container Height | 328±2mm |
| | Total Height | 338±2mm |
| Approx Weight | Approx 59.9 kg | |
| Terminal | T11 | |
| Container Material | ABS | |
| Max. Discharge Current | 7000A (5s) | |
| Internal Resistance | Approx 0.54mΩ | |
| Operating Temp. Range | Discharge: -20～55°C Charge: 0～40°C Storage: -20～50°C | |
| Capacity Affected by Temperature | 40°C | 103% |
| | 25°C | 100% |
| | 0°C | 86% |
| Cycle Use | Initial Charging Current less than 250.0A. Voltage: 2.4V at 25°C | Temp. coefficient -5mV/°C |
| Standby Use | Equalization voltage: 2.35V at 25°C | Temp. coefficient -3mV/°C |
| | Float voltage: 2.25V at 25°C | Temp. coefficient -3mV/°C |
| Self Discharge | USG series batteries may be stored for up to 9 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter. | |



ISO9001 ISO14001

## Performance

**Constant Current Discharge (Amperes) at 25 °C (77°F )**

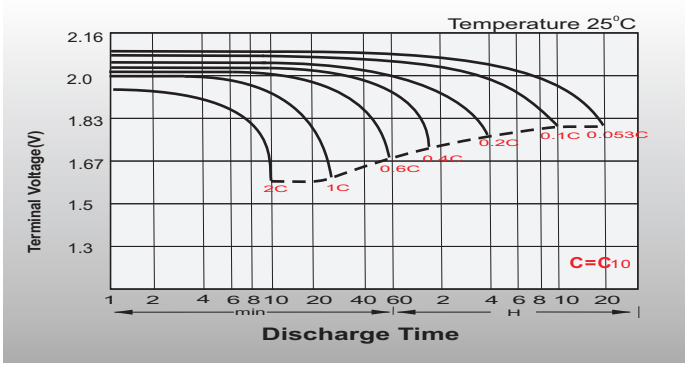
| F.V/Time | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 9h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 886.5 | 697.0 | 531.2 | 461.6 | 294.5 | 224.5 | 186.0 | 160.6 | 138.6 | 122.7 | 110.7 | 101.1 | 95.7 | 52.2 |
| 1.80V/cell | 1018.0 | 778.5 | 586.9 | 509.5 | 318.9 | 240.5 | 197.2 | 168.7 | 145.5 | 128.4 | 116.0 | 106.4 | 100.0 | 54.3 |
| 1.75V/cell | / | 856.0 | 633.1 | 544.1 | 337.8 | 254.1 | 206.6 | 175.3 | 150.6 | 133.1 | 119.7 | 109.6 | 101.9 | 55.4 |
| 1.70V/cell | / | 917.1 | 672.5 | 576.8 | 358.2 | 264.6 | 213.2 | 180.6 | 155.9 | 137.4 | 123.3 | 112.4 | 104.3 | 56.2 |
| 1.67V/cell | / | 953.8 | 697.0 | 597.8 | 367.3 | 273.1 | 218.6 | 184.4 | 158.5 | 139.5 | 125.1 | 114.0 | 105.6 | 56.7 |
| 1.60V/cell | / | 1019.0 | 748.6 | 634.8 | 382.1 | 284.0 | 226.7 | 190.1 | 162.4 | 142.4 | 127.4 | 116.4 | 107.6 | 57.5 |

**Constant Power Discharge (Watts/cell) at 25 °C (77°F )**

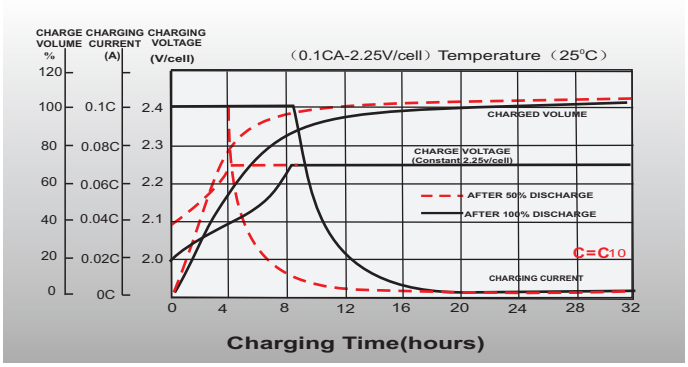
| F.V/Time | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 9h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 1683.5 | 1332.7 | 1022.1 | 891.8 | 571.0 | 436.5 | 363.0 | 314.6 | 272.5 | 241.9 | 218.6 | 199.9 | 189.4 | 103.4 |
| 1.80V/cell | 1907.7 | 1474.5 | 1118.7 | 979.3 | 615.2 | 465.8 | 383.3 | 329.4 | 285.1 | 252.2 | 228.5 | 209.9 | 197.4 | 107.5 |
| 1.75V/cell | / | 1603.2 | 1196.0 | 1040.4 | 649.9 | 491.1 | 400.4 | 340.5 | 294.1 | 260.6 | 235.3 | 215.9 | 201.0 | 109.5 |
| 1.70V/cell | / | 1705.8 | 1265.7 | 1098.7 | 685.9 | 509.9 | 412.2 | 350.1 | 303.9 | 268.8 | 241.9 | 221.3 | 205.7 | 110.9 |
| 1.67V/cell | / | 1750.2 | 1299.9 | 1130.0 | 699.8 | 524.1 | 421.2 | 356.3 | 307.9 | 271.9 | 244.8 | 223.8 | 207.8 | 111.8 |
| 1.60V/cell | / | 1857.6 | 1388.7 | 1193.5 | 724.5 | 542.4 | 435.5 | 366.2 | 314.5 | 276.9 | 248.8 | 228.1 | 211.4 | 113.3 |

# Characteristic Curve

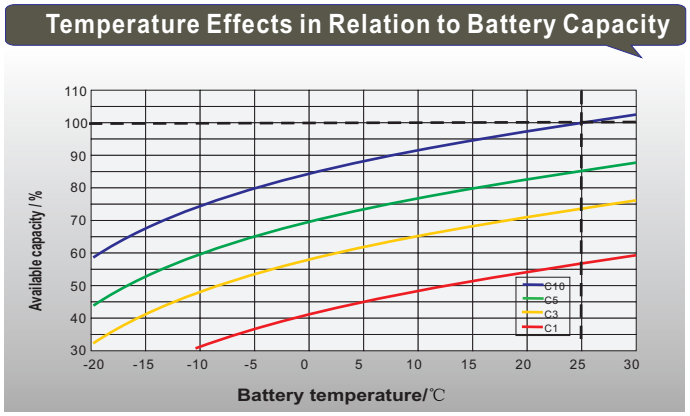
## Discharge Characteristics



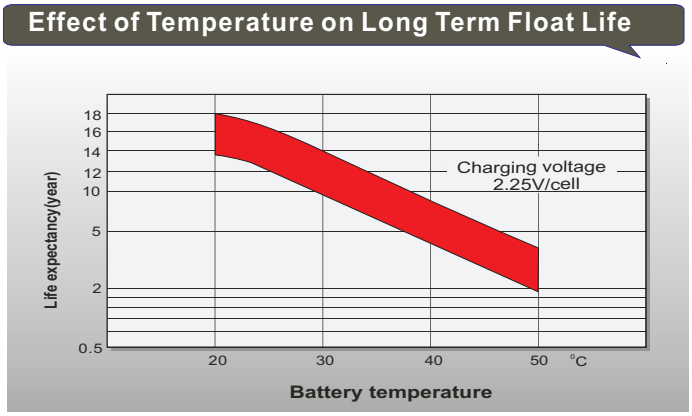

## Float Charging Characteristics



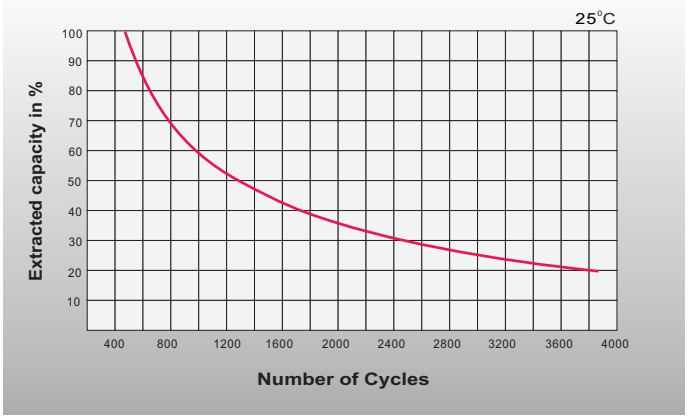

## Temperature Effects in Relation to Battery Capacity




## Effect of Temperature on Long Term Float Life




## Cycle Life in Relation to Depth of Discharge




## General Relation of Capacity VS. Storage Time