valve regulated
sealed lead acid type
rechargeable battery

sunbattery®

# SB12-100(12V100AH)

## (SB12-100V0)

## Specification

| | |
|---|---|
| Nominal Voltage | 12V |
| Nominal Capacity(10HR) | 100.0AH |
| Dimension | Length 330±2mm (12.99 inches)<br>Width 173±2mm (6.81 inches)<br>Container Height 212±2mm (8.35 inches)<br>Total Height (with Terminal) 220±2mm (8.66 inches) |
| Approx Weight | Approx 32.0 Kg (70.5 lbs) |
| Terminal | T11 |
| Container Material | ABS |
| Rated Capacity | 107.0 AH/5.35A (20hr ,1.80V/cell,25°C/77°F)<br>100.0 AH/10.0A (10hr,1.80V/cell,25°C/77°F)<br>87.0 AH/17.4A (5hr,1.75V/cell,25°C/77°F)<br>78.0 AH/26.0A (3hr,1.75V/cell,25°C/77°F)<br>62.0 AH/62.0A (1hr,1.60V/cell,25°C/77°F) |
| Max. Discharge Current | 1200A (5s) |
| Internal Resistance | Approx 4.9mΩ |
| Operating Temp.Range | Discharge : -15~50°C (5~122°F)<br>Charge : 0~40°C (32~104°F )<br>Storage : -15~40°C (5~104°F) |
| Nominal Operating Temp. Range | 25±3°C (77±5°F ) |
| Cycle Use | Initial Charging Current less than30.0A.Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C |
| Standby Use | No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C |
| Capacity affected by Temperature | 40°C (104°F) 103%<br>25°C ( 77°F) 100%<br>0°C ( 32°F) 86% |
| Self Discharge | SB series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. |
| Life expectancy | 8-12 years at 25°C with charge voltage 2.25V/cell. |


## Applications

- *UPS and EPS*
- *Emergency light*
- *Railway signal and aircraft signal system*
- *Marine and power stations Alarm and security system*
- *Electronic apparatus and equipment*
- *Communication power supply, DC power supply*

MH45680 | Intertek ETL SEMKO | ISO14001 | ISO9001 | VdS G116046

Comform to:
IEC60896-21&22 and/or IEC61427

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

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 117.0 | 98.4 | 87.3 | 72.4 | 55.9 | 47.8 | 31.0 | 23.3 | 19.1 | 16.0 | 14.1 | 11.3 | 9.69 | 5.17 |
| 1.80V/cell | 133.9 | 110.5 | 96.5 | 78.6 | 60.3 | 50.5 | 33.3 | 25.0 | 20.3 | 17.0 | 14.9 | 11.9 | 10.0 | 5.35 |
| 1.75V/cell | 152.1 | 124.5 | 106.7 | 85.5 | 65.7 | 55.0 | 34.6 | 26.0 | 21.0 | 17.4 | 15.4 | 12.3 | 10.3 | 5.49 |
| 1.70V/cell | 171.7 | 138.2 | 117.7 | 93.3 | 70.8 | 58.2 | 36.5 | 27.4 | 21.9 | 18.4 | 16.1 | 12.8 | 10.7 | 5.63 |
| 1.65V/cell | 184.4 | 147.9 | 125.3 | 98.5 | 74.9 | 60.2 | 37.8 | 28.5 | 22.8 | 19.0 | 16.7 | 13.2 | 11.0 | 5.80 |
| 1.60V/cell | 202.9 | 162.0 | 136.1 | 105.1 | 77.9 | 62.0 | 38.8 | 29.2 | 23.3 | 19.4 | 17.0 | 13.4 | 11.2 | 5.89 |

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

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 218.5 | 185.6 | 166.3 | 139.4 | 108.5 | 93.2 | 60.7 | 45.8 | 37.7 | 31.8 | 27.9 | 22.5 | 19.4 | 10.3 |
| 1.80V/cell | 247.1 | 205.6 | 181.2 | 149.2 | 116.1 | 97.8 | 64.8 | 49.0 | 39.8 | 33.5 | 29.4 | 23.6 | 20.0 | 10.7 |
| 1.75V/cell | 276.2 | 228.9 | 198.3 | 160.8 | 125.5 | 106.1 | 67.2 | 50.7 | 41.0 | 34.2 | 30.3 | 24.3 | 20.5 | 10.9 |
| 1.70V/cell | 304.9 | 250.5 | 217.3 | 174.6 | 134.7 | 112.0 | 70.6 | 53.3 | 42.8 | 36.1 | 31.7 | 25.3 | 21.2 | 11.2 |
| 1.65V/cell | 324.5 | 266.2 | 229.5 | 182.7 | 141.2 | 115.0 | 72.8 | 55.2 | 44.3 | 37.1 | 32.7 | 26.1 | 21.8 | 11.6 |
| 1.60V/cell | 348.9 | 286.8 | 246.6 | 193.6 | 146.0 | 117.8 | 74.3 | 56.4 | 45.2 | 37.9 | 33.3 | 26.5 | 22.2 | 11.7 |

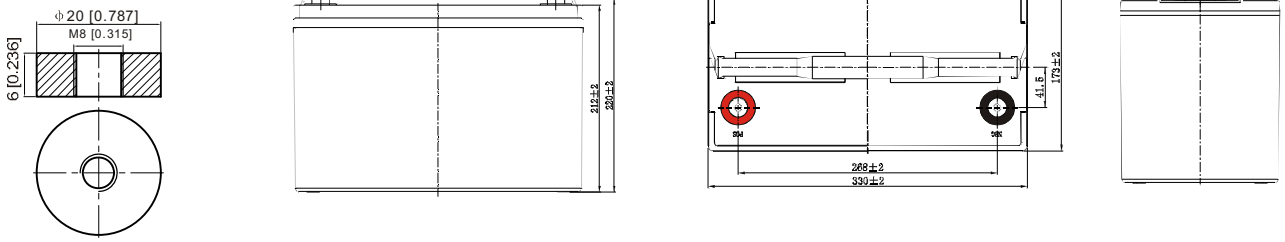


Specifications subject to change without notice.

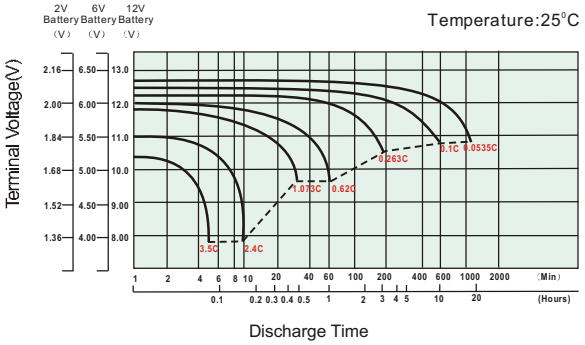
## Dimensions

### T11 Terminal

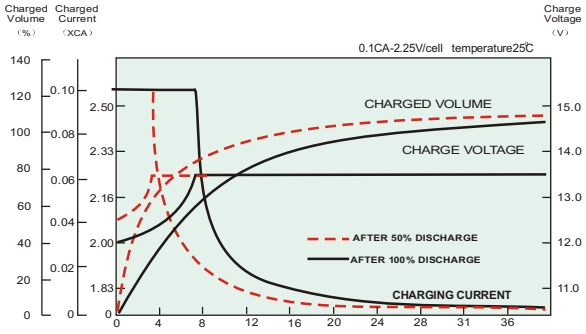
Unit: mm [inches]



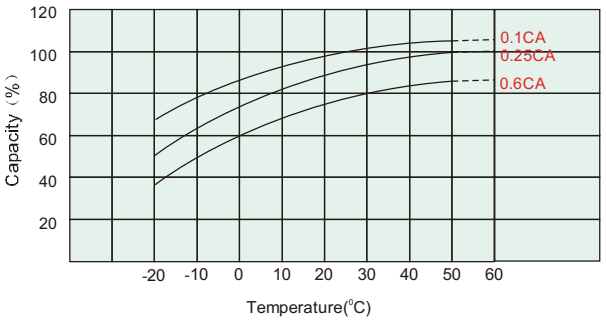

## Discharge Characteristics



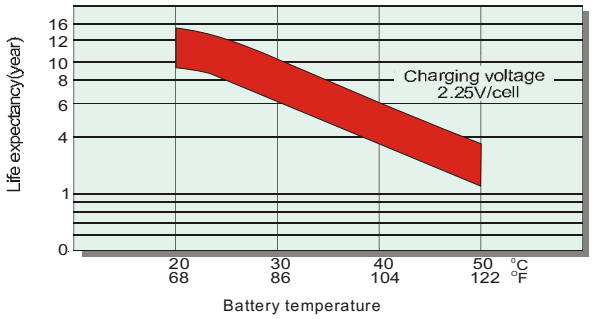

## Float Charging Characteristics

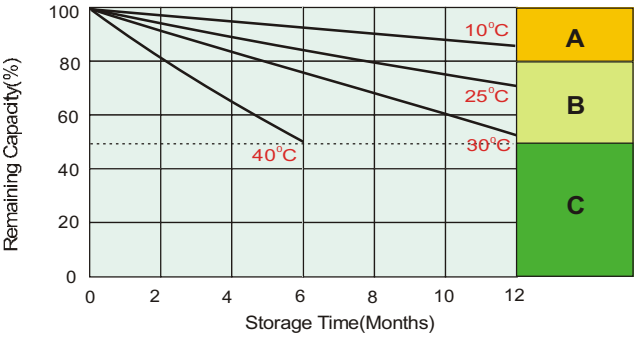



## Temperature Effects in Relation to Battery Capacity




## Effect of Temperature on Long Term Float Life




## Self Discharge Characteristics

**A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

**B** Supplementary charge required before use.Optional charging way as below:
1.Charged for above 3 days at limted current 0.25CA and constant volatge 2.25V/cell.
2.Charged for above 20hours at limted current 0.25CA and constant volatge 2.45V/cell.
3.Charged for 8~10hours at limted current 0.05CA .

**C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.