



valve regulated  
sealed lead acid type  
rechargeable battery

**sunbattery®**

# SB12-75(12V75AH)

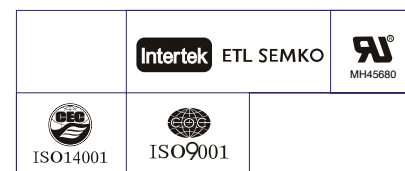
## Specification

Nominal Voltage	12V
Nominal Capacity(10HR)	75.0AH
Dimension	Length 260±3mm (10.24 inches)
	Width 168±2mm (6.61 inches)
	Container Height 210±3mm (8.19 inches)
	Total Height (with Terminal) 216±3mm (8.43 inches)
	Approx Weight
Terminal	T6
Container Material	ABS Standard ABS UL94 HB Optional ABS UL94 V0
Rated Capacity	78.0 AH/3.90A (20hr, 1.80V/cell, 25°C/77°F)
	75.0 AH/7.50A (10hr, 1.80V/cell, 25°C/77°F)
	64.5 AH/12.9A (5hr, 1.75V/cell, 25°C/77°F)
	58.5 AH/19.5A (3hr, 1.75V/cell, 25°C/77°F)
	45.8 AH/45.8A (1hr 1.60V/cell 25°C/77°F)
Max. Discharge Current	900A (5s)
Internal Resistance	Approx 6.6mΩ
Operating Temp. Range	Discharge : -15~50°C (5~122°F)
	Charge : 0~40°C (32~104°F)
	Storage : -15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 22.5A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	Standby Use
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	SUN 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

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system



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

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	128.4	100.9	85.8	71.8	57.1	43.2	35.4	22.5	17.8	14.5	11.7	10.2	8.29	7.08	3.86
1.80V/cell	172.3	128.9	103.7	84.9	67.3	50.2	39.6	24.6	19.2	15.5	12.6	10.9	8.79	7.50	3.90
1.75V/cell	194.3	141.7	113.3	91.3	69.9	52.1	41.4	25.5	19.5	15.9	12.9	11.2	8.94	7.58	3.94
1.70V/cell	213.9	154.4	120.9	95.9	72.7	54.2	42.7	26.5	20.1	16.3	13.2	11.5	9.07	7.65	4.01
1.65V/cell	235.9	166.7	128.6	101.9	76.7	55.6	44.2	27.2	20.9	16.8	13.6	11.7	9.21	7.81	4.07
1.60V/cell	260.2	180.9	137.5	108.6	81.0	57.9	45.8	28.2	21.6	17.4	14.1	12.0	9.30	7.89	4.09

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

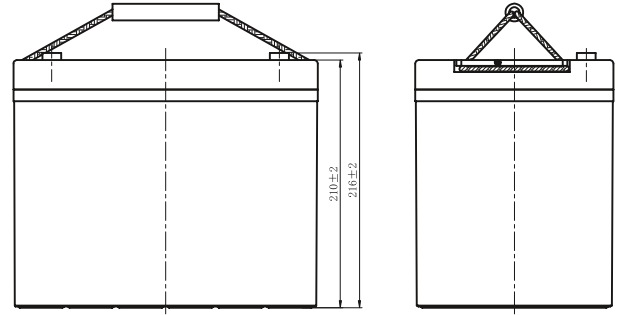
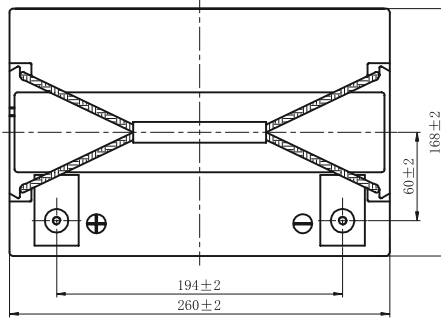
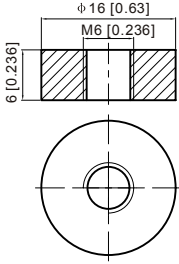
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	234.7	186.4	160.1	135.3	108.7	83.0	68.2	43.7	34.7	28.4	23.0	20.1	16.4	14.0	7.65
1.80V/cell	311.7	235.4	190.9	157.6	126.3	95.8	76.0	47.4	37.1	30.2	24.6	21.4	17.3	14.8	7.71
1.75V/cell	343.9	254.5	205.9	167.9	130.1	98.4	79.1	49.0	37.7	30.8	25.1	22.0	17.6	14.9	7.78
1.70V/cell	368.2	271.1	216.8	175.1	134.6	102.0	81.4	50.8	38.7	31.5	25.7	22.4	17.8	15.1	7.92
1.65V/cell	400.3	289.9	228.8	184.7	140.9	103.6	83.5	52.0	40.1	32.5	26.3	22.8	18.0	15.4	8.02
1.60V/cell	431.3	307.6	240.6	194.6	147.7	107.4	86.0	53.4	41.2	33.4	27.1	23.2	18.2	15.5	8.05



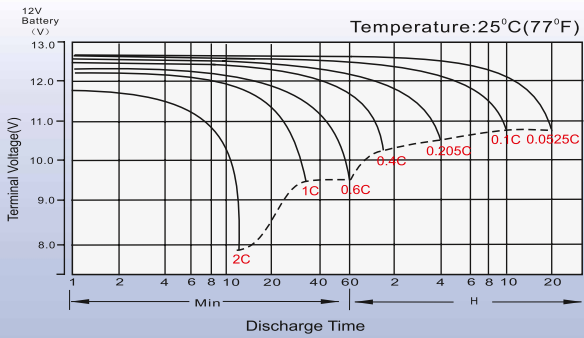
## Dimensions

### T6 Terminal

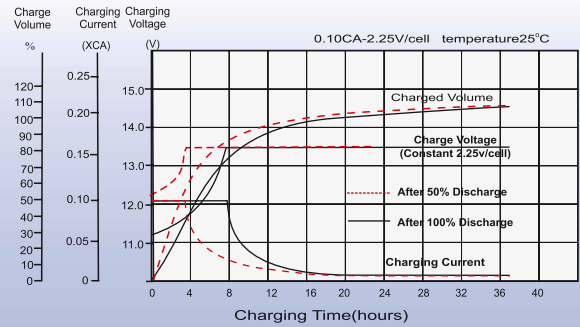
Unit: mm [inches]



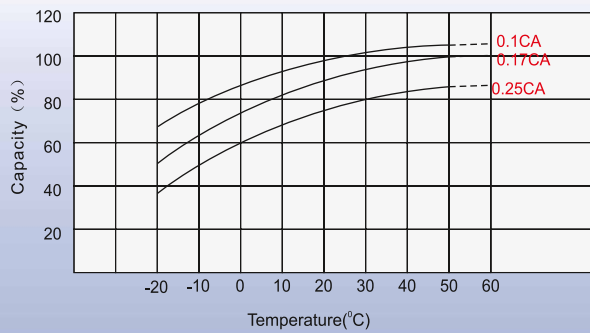
## Discharge Characteristics



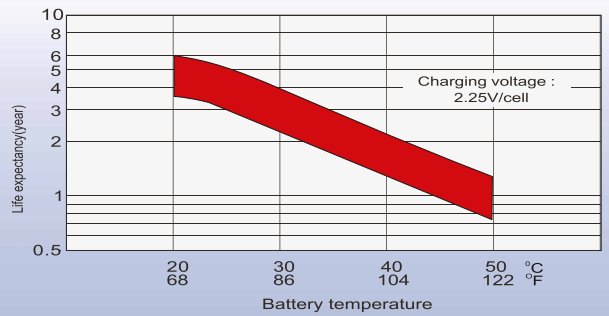
## Charging Characteristics (cycle use)



## Temperature Effects in Relation to Battery Capacity

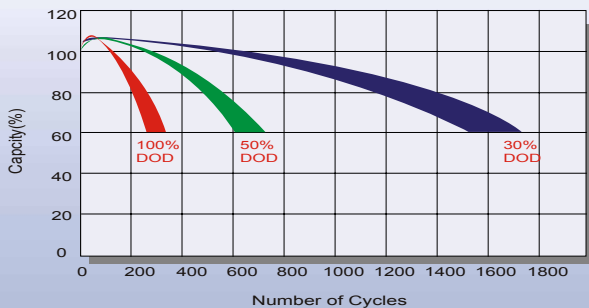


## Effect of Temperature on Long Term Float Life

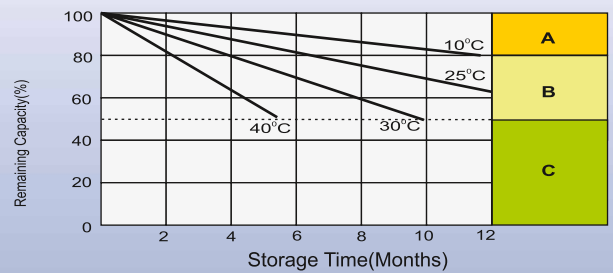


## Cycle Life in Relation to Depth of Discharge

Testing condition  
Discharging: current 0.17C (FV 1.7V/cell);  
Charging: current 2.45V/cell, max. 0.25CA;  
Charging volume: 125% of discharged capacity.



## 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 limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.