



valve regulated  
sealed lead acid type  
rechargeable battery



# SB12-100 (12V100AH) [SB 12-100V01]

## Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	100.0AH	
Dimension	Length	330±3mm (12.99 inches)
	Width	173±2mm (6.81 inches)
	Container Height	212±2mm (8.35 inches)
	Total Height (with Terminal)	220±2mm (8.66 inches)
Approx Weight	Approx 32,0 Kg (71.6 lbs)	
Terminal	T11	
Container Material	ABS UL.94:HB0(optional ABS UL.94:V0)	
Rated Capacity	100.0 AH/5.00A	(20hr, 1.80V/cell, 25°C/77°F)
	93.5 AH/9.35A	(10hr, 1.80V/cell, 25°C/77°F)
	81.5 AH/16.3A	(5hr, 1.75V/cell, 25°C/77°F)
	72.9 AH/24.3A	(3hr, 1.75V/cell, 25°C/77°F)
	57.9 AH/57.9A	(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)	
	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 30.0A. 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%
	25°C (77°F)	100%
	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

- ◆ 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



Conform 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) 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

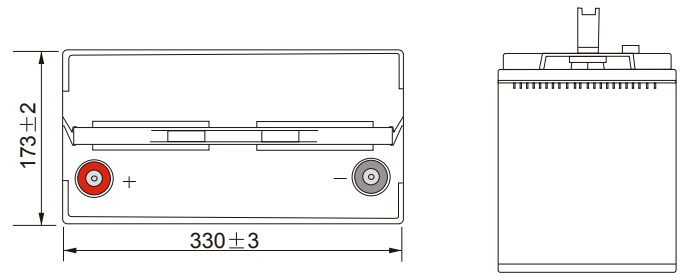
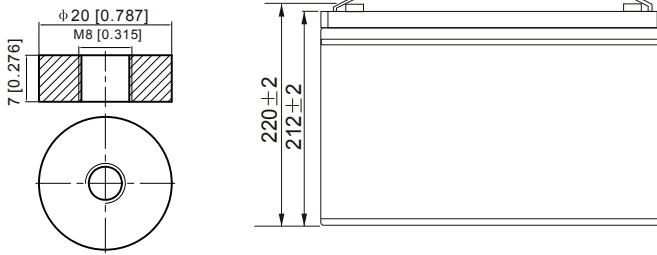


Updated: 06.05.2020

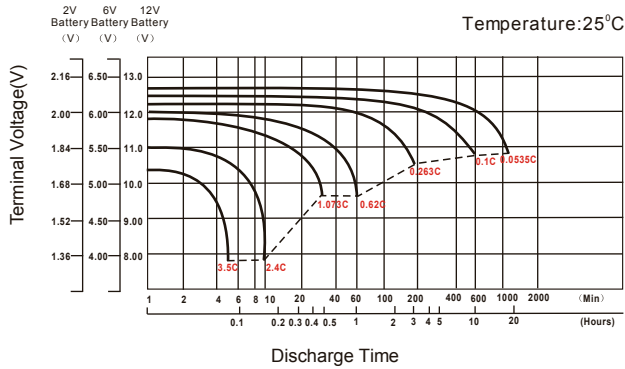
## Dimensions

### T11 Terminal

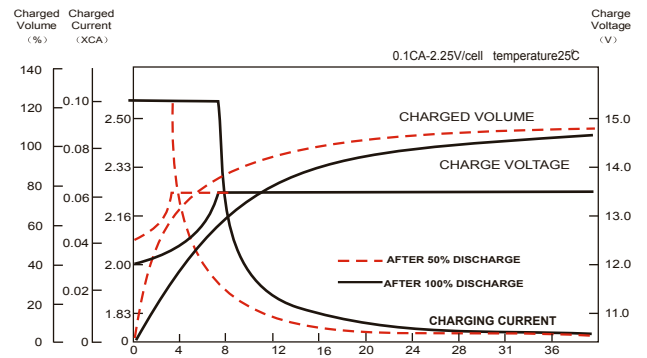
Unit: mm [inches]



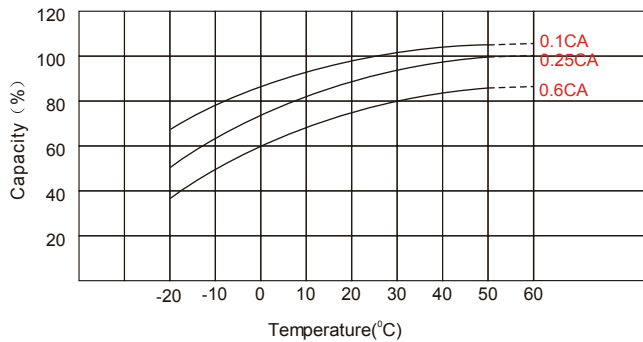
## Discharge Characteristics



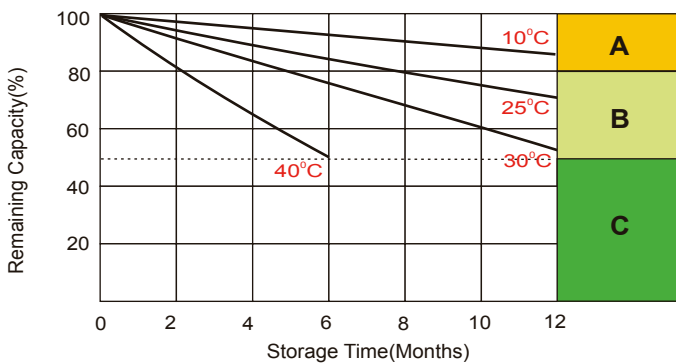
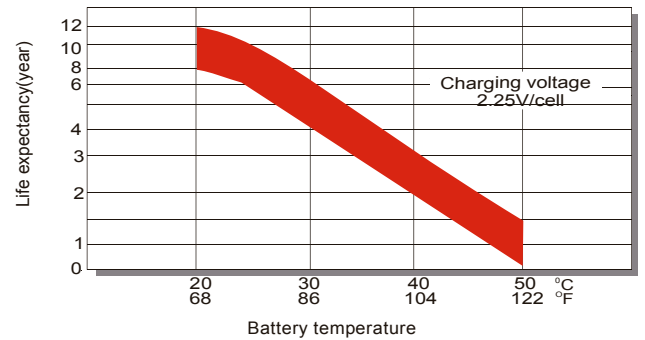
## Float Charging Characteristics



## 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 limited current 0.25CA and constant volatge 2.25V/cell.
  2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
  3. Charged for 8~10hours 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.