



valve regulated
sealed lead acid type
rechargeable battery

sunbattery®

SB12-24 (12V24AH) (SB12-24 V0)



Specification		
Nominal Voltage	12V	
Nominal Capacity(20HR)	26.0AH	
Dimension	Length	166.5 ± 1mm (6.56 inches)
	Width	175 ± 1mm (6.93 inches)
	Container Height	125 ± 1mm (4.92 inches)
	Total Height (with Terminal)	125 ± 1mm (4.92 inches)
	Approx Weight	Approx 8.0 kg (17.64lbs)
Terminal	T3 / T12	
Container Material	ABS UL.94:HB0(optional ABS UL.94:V0)	
Rated Capacity	26.0 AH/1.30A	(20hr, 1.80V/cell, 25°C/77°F)
	24.2 AH/2.42A	(10hr, 1.80V/cell, 25°C/77°F)
	22.1 AH/4.42A	(5hr, 1.75V/cell, 25°C/77°F)
	19.9 AH/6.63A	(3hr, 1.75V/cell, 25°C/77°F)
	16.3 AH/16.3A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	390A (5s)	
Internal Resistance	Approx 14mΩ	
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 7.8A. 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	3~5 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	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	49.5	32.9	27.1	23.9	19.6	15.3	12.6	7.76	5.84	4.80	4.08	3.53	2.81	2.35	1.29
1.80V/cell	59.3	39.5	31.9	27.3	21.8	16.7	13.7	8.32	6.24	5.11	4.28	3.69	2.91	2.42	1.30
1.75V/cell	71.1	45.2	35.5	30.2	23.4	17.9	14.5	8.67	6.45	5.23	4.40	3.79	2.99	2.48	1.31
1.70V/cell	82.5	50.5	39.1	32.7	25.0	18.8	15.1	8.97	6.61	5.36	4.50	3.87	3.04	2.52	1.34
1.65V/cell	91.0	54.8	41.9	35.0	26.3	19.6	15.6	9.26	6.79	5.49	4.60	3.95	3.08	2.55	1.35
1.60V/cell	100.4	59.3	45.0	37.0	27.7	20.4	16.2	9.49	6.96	5.63	4.70	4.04	3.15	2.59	1.36

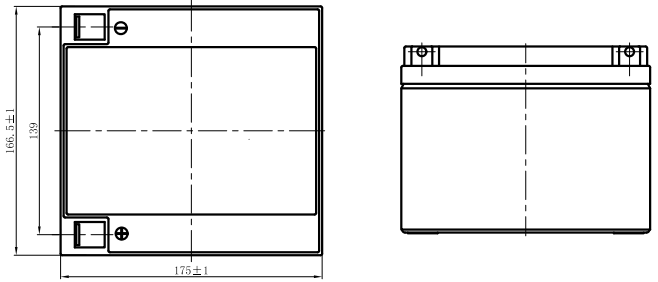
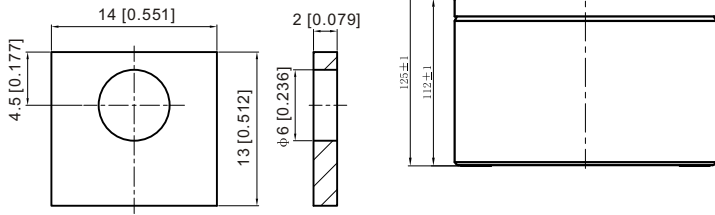
Constant Power Discharge (Watts) at 25° C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	92.4	61.6	51.0	45.0	37.1	29.3	24.4	15.1	11.4	9.39	7.99	6.94	5.54	4.64	2.55
1.80V/cell	107.2	72.3	59.0	51.1	41.2	31.9	26.2	16.0	12.1	9.94	8.36	7.22	5.73	4.78	2.57
1.75V/cell	127.4	82.0	65.0	56.0	43.8	33.9	27.6	16.7	12.4	10.1	8.56	7.40	5.87	4.89	2.59
1.70V/cell	145.8	90.4	71.0	60.2	46.5	35.4	28.7	17.2	12.7	10.4	8.74	7.55	5.96	4.96	2.64
1.65V/cell	158.4	96.5	75.1	63.8	48.6	36.7	29.5	17.7	13.0	10.6	8.90	7.67	6.04	5.02	2.67
1.60V/cell	171.6	103.0	79.3	66.3	50.4	37.9	30.5	18.1	13.3	10.8	9.06	7.82	6.15	5.10	2.68

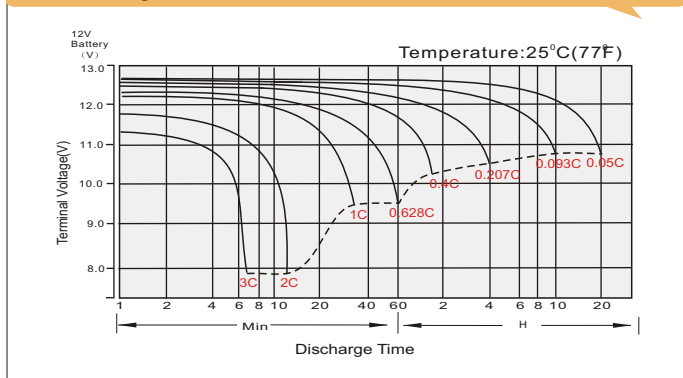
Dimensions

T3 Terminal

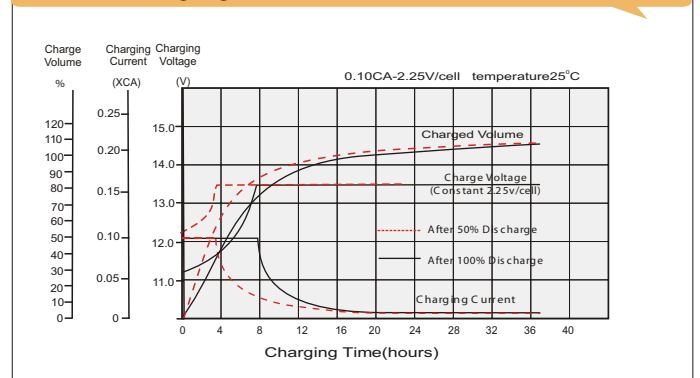
Unit: mm [inches]



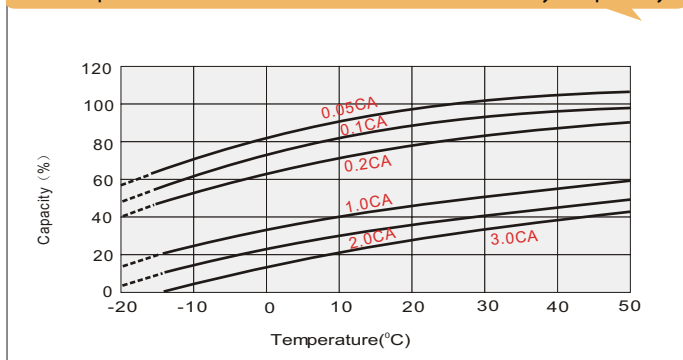
Discharge Characteristics



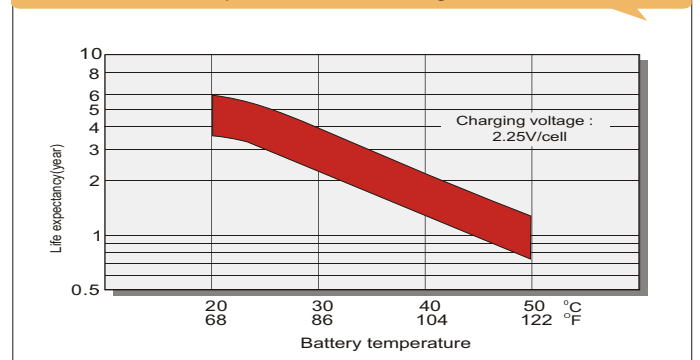
Float Charging Characteristics



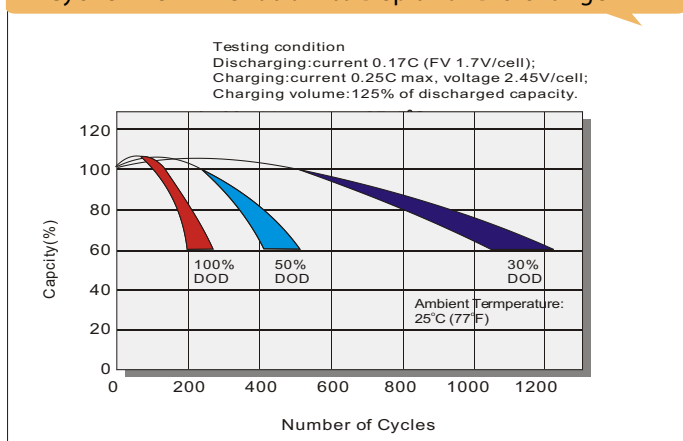
Temperature Effects in Relation to Battery Capacity



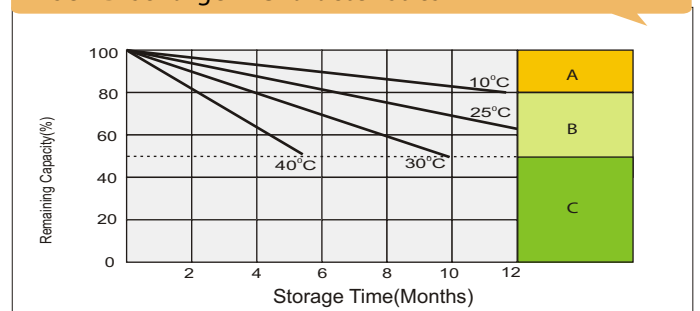
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



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