SB SERIES-General Purpose

SB12-18 (12V18AH)

Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	18.0AH	
Dimension	Length	181.5±2mm (7.14 inches)
	Width	77±1mm (3.03 inches)
	Container Height	167.5±2mm (6.59 inches)
	Total Height (with Terminal)	167.5±2mm (6.59 inches)
Approx Weight	Approx 5.32kg (11.73lbs)	
Terminal	T3	
Container Material	ABS	
Rated Capacity	18.0 AH/0.90A	(20hr ,1.80V/cell,25°C/77°F)
	16.7 AH/1.67A	(10hr,1.80V/cell,25°C/77°F)
	15.3 AH/3.06A	(5hr,1.75V/cell,25°C/77°F)
	13.8 AH/4.59A	(3hr,1.75V/cell,25°C/77°F)
	11.3 AH/11.3A	(1hr,1.60V/cell,25°C/77°F)
Max. Discharge Current	270A (5s)	
Internal Resistance	Approx 16mΩ	
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 5.4A.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	Leoch LP 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.	



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*

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	34.3	26.3	21.8	18.9	14.6	10.7	9.05	5.35	4.19	3.41	2.78	2.41	1.94	1.62	0.89
1.80V/cell	46.0	33.6	26.3	22.3	17.2	12.5	10.1	5.84	4.51	3.64	2.98	2.58	2.06	1.67	0.90
1.75V/cell	51.9	37.0	28.8	24.0	17.9	13.0	10.6	6.06	4.59	3.72	3.06	2.66	2.10	1.72	0.91
1.70V/cell	57.1	40.3	30.7	25.2	18.6	13.5	10.9	6.21	4.72	3.82	3.14	2.71	2.13	1.75	0.93
1.65V/cell	63.0	43.5	32.7	26.8	19.6	13.8	11.2	6.30	4.92	3.95	3.22	2.77	2.16	1.79	0.94
1.60V/cell	69.5	47.2	34.9	28.5	20.7	14.4	11.3	6.57	5.07	4.07	3.33	2.83	2.18	1.81	0.95

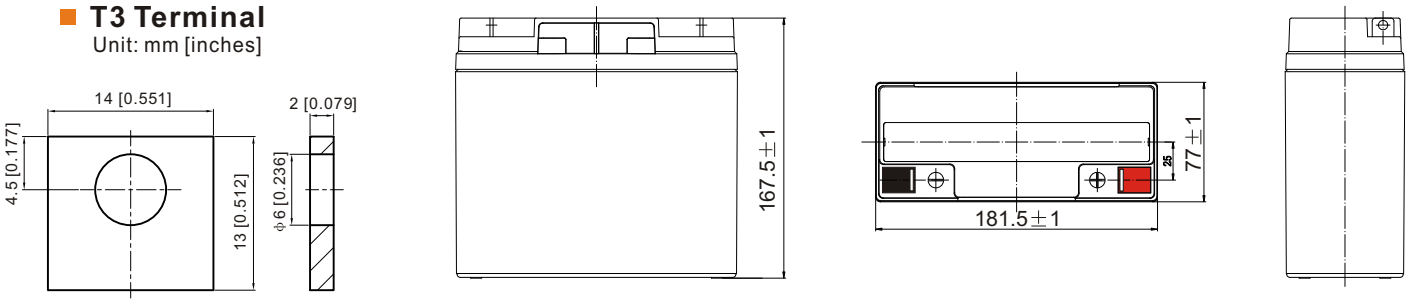
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	62.7	48.6	40.7	35.5	27.8	20.6	17.5	10.4	8.16	6.66	5.45	4.74	3.84	3.21	1.77
1.80V/cell	83.2	61.4	48.5	41.4	32.3	23.8	19.5	11.3	8.74	7.07	5.82	5.06	4.06	3.31	1.78
1.75V/cell	91.8	66.4	52.3	44.1	33.2	24.5	20.3	11.6	8.86	7.20	5.95	5.18	4.12	3.39	1.80
1.70V/cell	98.3	70.7	55.1	46.0	34.4	25.4	20.8	11.9	9.09	7.38	6.09	5.28	4.17	3.46	1.83
1.65V/cell	106.9	75.6	58.1	48.5	36.0	25.8	21.2	12.0	9.44	7.61	6.24	5.38	4.23	3.52	1.85
1.60V/cell	115.2	80.2	61.1	51.1	37.7	26.7	21.3	12.5	9.68	7.82	6.42	5.48	4.26	3.56	1.86

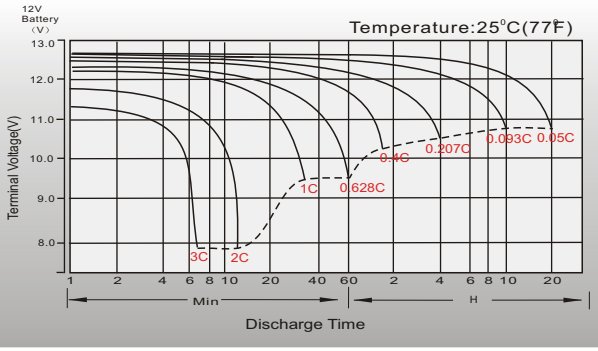
Dimensions

T3 Terminal

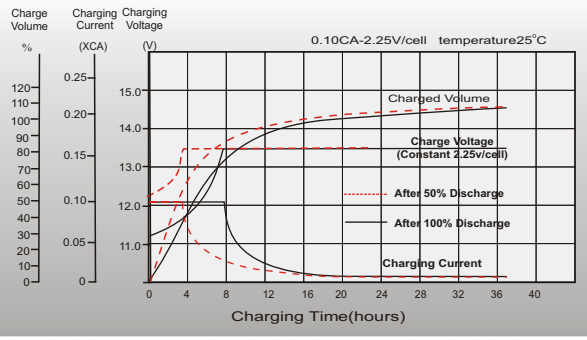
Unit: mm [inches]



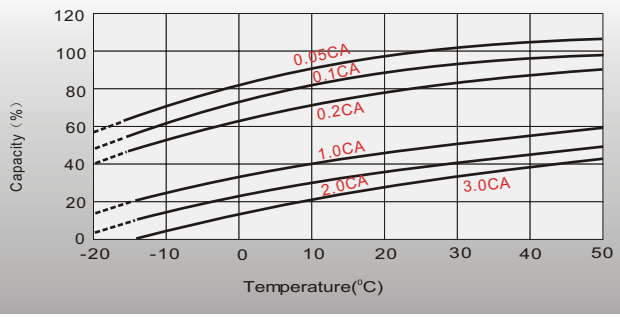
Discharge Characteristics



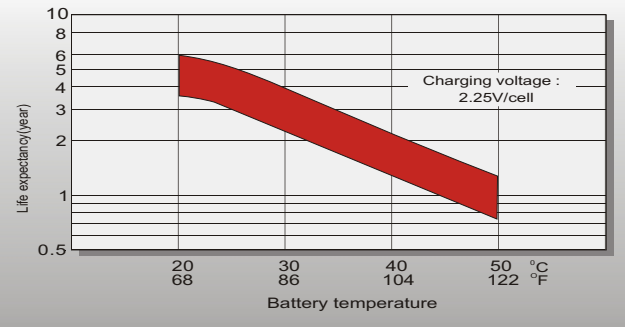
Float Charging Characteristics



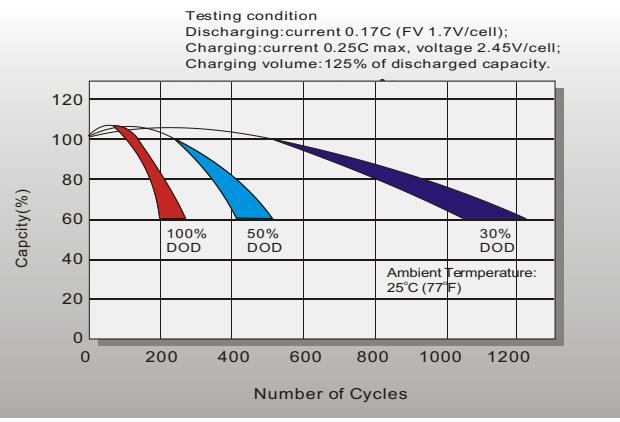
Temperature Effects in Relation to Battery Capacity



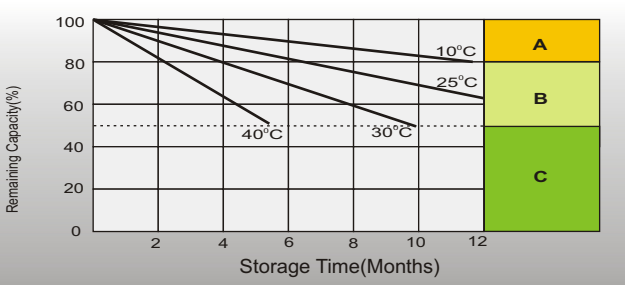
Effect of Temperature on Long Term Float Life



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 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.