



valve regulated  
sealed lead acid type  
rechargeable battery

**sunbattery®**

# MB 12-0.8 (12V0.8AH)



## Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	0.8AH	
Dimension	Length	96 ± 1mm (3.78 inches)
	Width	25 ± 1mm (0.98 inches)
	Container Height	62 ± 1mm (2.44 inches)
	Total Height (with Terminal)	62 ± 1mm (2.44 inches)
Approx Weight	Approx 0.35 kg (0.77lbs)	
Terminal	AMP	
Container Material	ABS	
Rated Capacity	0.80 AH/0.04A	(20hr, 1.80V/cell, 25°C/77°F)
	0.74 AH/0.074A	(10hr, 1.80V/cell, 25°C/77°F)
	0.68 AH/0.136A	(5hr, 1.75V/cell, 25°C/77°F)
	0.612 AH/0.204A	(3hr, 1.75V/cell, 25°C/77°F)
	0.502 AH/0.502A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	12A (5s)	
Internal Resistance	Approx 150mΩ	
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 0.24A. 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%
Life expectancy	3~5 years at 25°C with charge voltage of 2.25V/cell	
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.	

## 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

Intertek ETL SEMKO		MH45680
ISO14001	ISO9001	

## 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	1.52	1.17	0.97	0.84	0.65	0.48	0.402	0.238	0.186	0.151	0.123	0.107	0.086	0.072	0.0396
1.80V/cell	2.04	1.49	1.17	0.99	0.76	0.56	0.451	0.260	0.200	0.162	0.132	0.115	0.092	0.074	0.0400
1.75V/cell	2.31	1.64	1.28	1.07	0.79	0.58	0.471	0.269	0.204	0.165	0.136	0.118	0.093	0.076	0.0404
1.70V/cell	2.54	1.79	1.37	1.12	0.83	0.60	0.486	0.276	0.210	0.170	0.139	0.120	0.095	0.078	0.0411
1.65V/cell	2.80	1.93	1.45	1.19	0.87	0.61	0.498	0.280	0.219	0.175	0.143	0.123	0.096	0.080	0.0417
1.60V/cell	3.09	2.10	1.55	1.27	0.92	0.64	0.502	0.292	0.225	0.181	0.148	0.126	0.097	0.080	0.0419

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

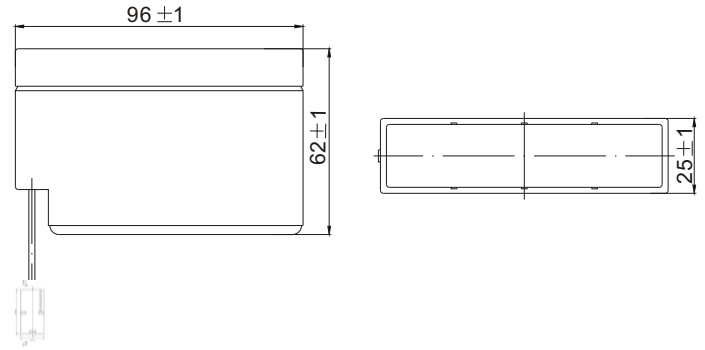
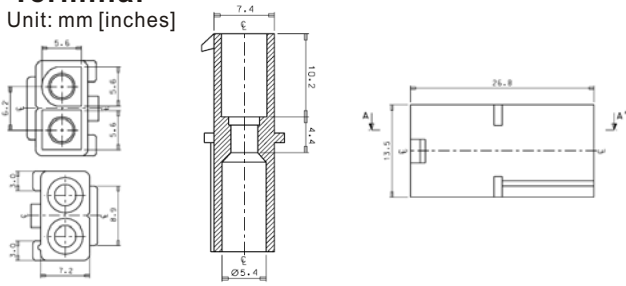
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2.79	2.16	1.81	1.58	1.23	0.92	0.776	0.462	0.363	0.296	0.242	0.211	0.171	0.143	0.078
1.80V/cell	3.70	2.73	2.16	1.84	1.43	1.06	0.865	0.501	0.388	0.314	0.259	0.225	0.180	0.147	0.079
1.75V/cell	4.08	2.95	2.33	1.96	1.48	1.09	0.900	0.518	0.394	0.320	0.264	0.230	0.183	0.151	0.080
1.70V/cell	4.37	3.14	2.45	2.04	1.53	1.13	0.926	0.529	0.404	0.328	0.271	0.235	0.185	0.154	0.081
1.65V/cell	4.75	3.36	2.58	2.16	1.60	1.15	0.940	0.534	0.420	0.338	0.277	0.239	0.188	0.157	0.082
1.60V/cell	5.12	3.57	2.72	2.27	1.68	1.19	0.945	0.554	0.430	0.348	0.285	0.244	0.189	0.158	0.083



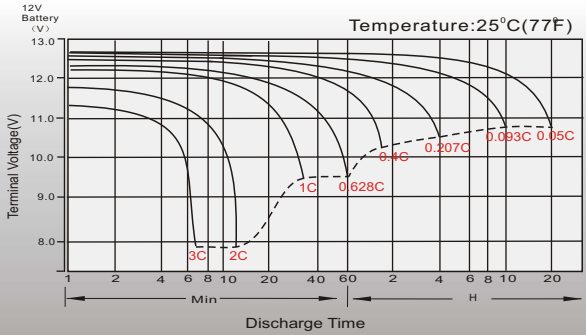
# Dimensions

## Terminal

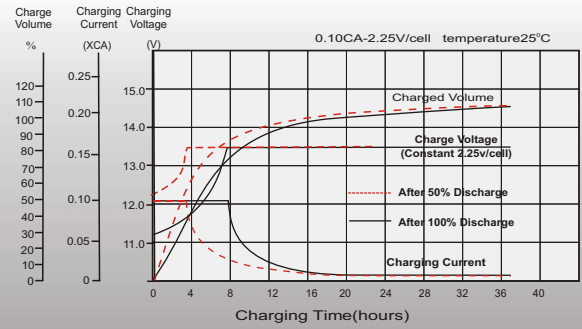
Unit: mm [inches]



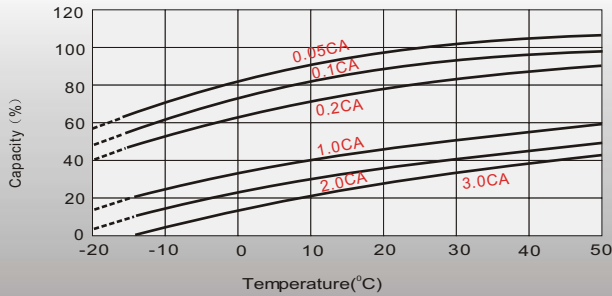
## Discharge Characteristics



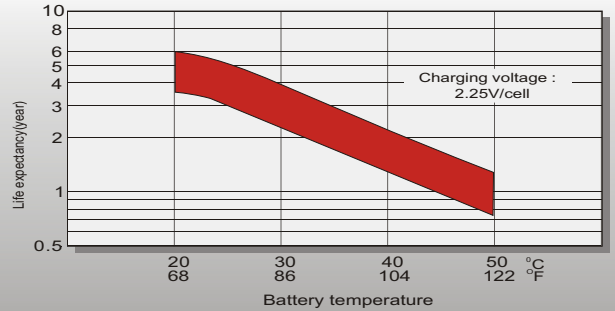
## Float Charging Characteristics



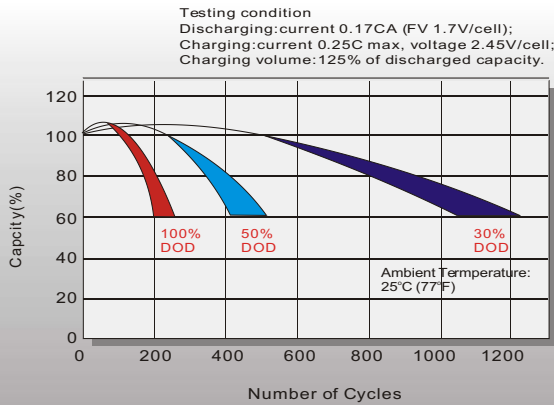
## Temperature Effects in Relation to Battery Capacity



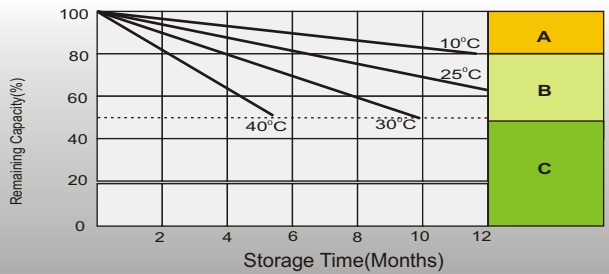
## Effect of Temperature on Long Term Float Life



## 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 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.