



valve regulated
sealed lead acid type
rechargeable battery



MB12-14HC(12V14AH)

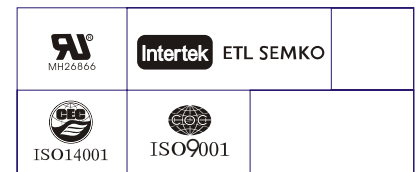
Specification

Nominal Voltage	12V		
Nominal Capacity(10HR)	13.0AH		
Dimension	Length	151±2mm (5.95 inches)	
	Width	98±1mm (3.86 inches)	
	Container Height	95±1mm (3.74 inches)	
	Total Height (with Terminal)	101±2mm (3.98 inches)	
	Approx Weight	Approx 4.3Kg (9.48lbs)	
Terminal	T2		
Container Material	ABS		
Rated Capacity	13.9AH/0.70A	(20hr, 1.80V/cell, 25°C/77°F)	
	13.0AH/1.30A	(10hr, 1.80V/cell, 25°C/77°F)	
	11.4AH/2.28A	(5hr, 1.75V/cell, 25°C/77°F)	
	10.3AH/3.45A	(3hr, 1.75V/cell, 25°C/77°F)	
	8.40AH/8.40A	(1hr, 1.60V/cell, 25°C/77°F)	
Max. Discharge Current	195A (5s)		
Internal Resistance	Approx 14.0mΩ		
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 3.9A. 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	MB 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

- ◆ Electric tools
- ◆ Vehicle in place of walking
- ◆ Lawn mowers
- ◆ Golf trolleys and golf cart
- ◆ Portable apparatus, lights and instruments;
- ◆ Electric toys
- ◆ Illumination light
- ◆ Fire alarms
- ◆ Portable power
- ◆ Wheelchairs
- ◆ Medical equipments.



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	19.0	16.0	14.0	10.1	8.00	6.49	4.03	3.14	2.55	2.07	1.81	1.47	1.23	0.690
1.80V/cell	24.3	19.4	16.5	11.9	9.30	7.27	4.40	3.38	2.72	2.22	1.94	1.56	1.30	0.697
1.75V/cell	26.7	21.1	17.8	12.3	9.65	7.61	4.56	3.45	2.78	2.28	1.99	1.59	1.31	0.703
1.70V/cell	29.1	22.6	18.7	12.8	10.0	7.85	4.75	3.54	2.85	2.34	2.03	1.61	1.33	0.716
1.65V/cell	31.4	24.0	19.9	13.5	10.3	8.11	4.88	3.69	2.95	2.40	2.07	1.64	1.35	0.725
1.60V/cell	34.1	25.7	21.2	14.3	10.7	8.40	5.04	3.81	3.04	2.48	2.12	1.65	1.37	0.729

Constant Power Discharge (Watts/cell) 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	35.5	30.2	26.7	19.4	15.5	12.6	7.86	6.14	4.99	4.06	3.57	2.91	2.43	1.381
1.80V/cell	44.8	35.9	31.0	22.6	17.8	14.0	8.52	6.58	5.30	4.35	3.81	3.09	2.57	1.392
1.75V/cell	48.6	38.9	33.1	23.3	18.4	14.6	8.81	6.68	5.41	4.46	3.91	3.14	2.60	1.404
1.70V/cell	52.2	41.2	34.6	24.2	19.1	15.0	9.14	6.85	5.54	4.56	3.98	3.18	2.62	1.429
1.65V/cell	56.0	43.5	36.6	25.4	19.5	15.5	9.37	7.12	5.72	4.68	4.07	3.23	2.67	1.445
1.60V/cell	59.7	46.0	38.6	26.5	20.2	15.9	9.63	7.30	5.87	4.81	4.15	3.25	2.70	1.451

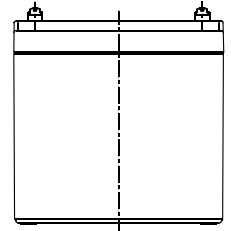
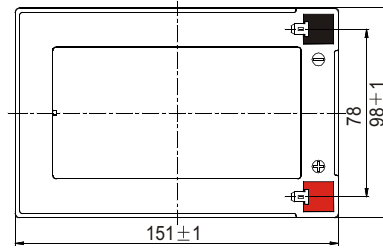
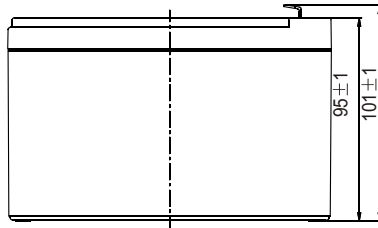
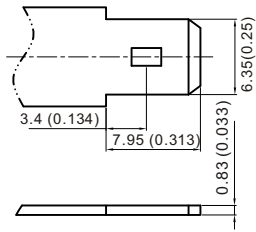
Specifications subject to change without notice.



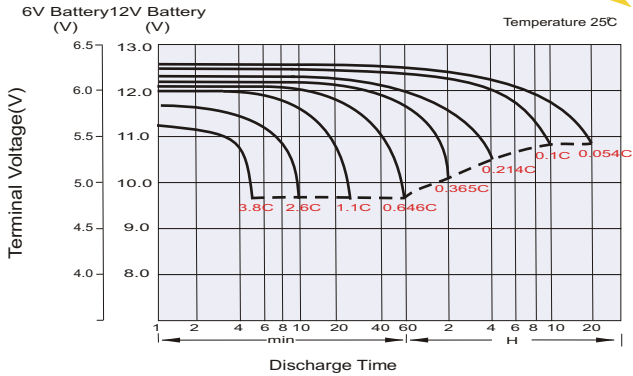
Dimensions

T2 Terminal

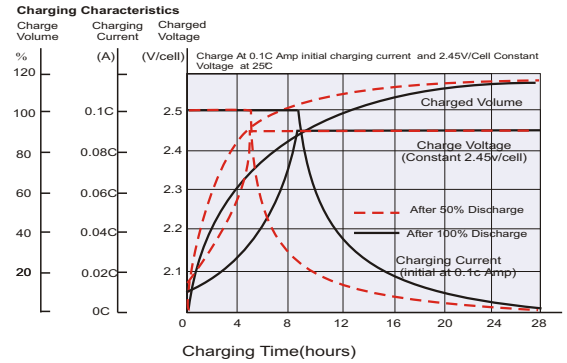
Unit: mm [inches]



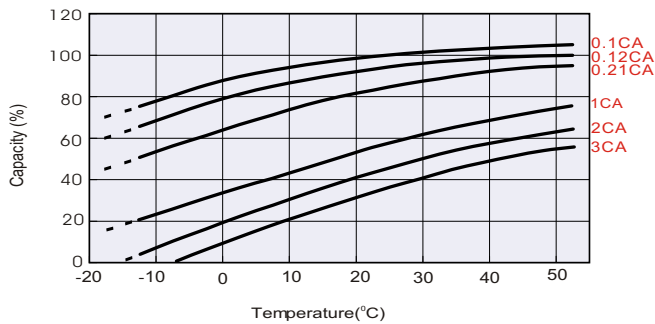
Discharge Characteristics



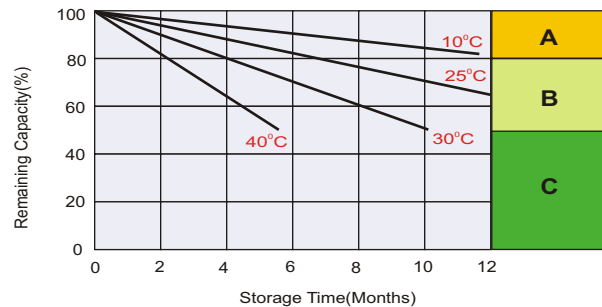
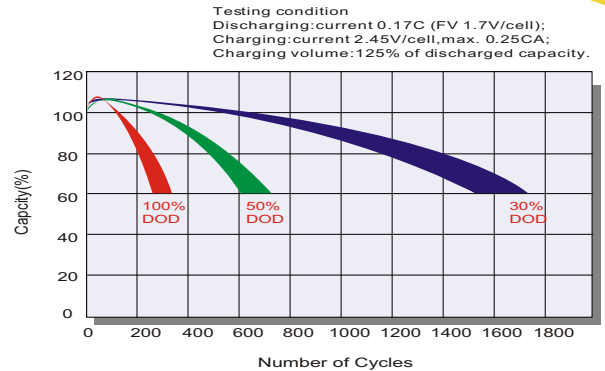
Charging Characteristics (cycle use)



Temperature Effects in Relation to Battery Capacity



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:
 - Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
 - Charged for above 20 hours at limited current 0.25CA and constant volatge 2.45V/cell.
 - 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.