



valve regulated  
sealed lead acid type  
rechargeable battery

**sunbattery**<sup>®</sup>

# MB12-35HC (12V35AH)

Specification	
Nominal Voltage	12V
Nominal Capacity(20HR)	35.0AH
Dimension	Length 195±2mm (7.68 inches)
	Width 130±2mm (5.12 inches)
	Container Height 164±2mm (6.46 inches)
	Total Height (with Terminal) 167±2mm (6.57 inches)
	Approx Weight Approx 11.2 kg (24.69lbs)
Terminal	T6
Container Material	ABS
Rated Capacity	35.0 AH/1.75A (20hr, 1.80V/cell, 25°C/77°F)
	32.6 AH/3.26A (10hr, 1.80V/cell, 25°C/77°F)
	29.8 AH/5.95A (5hr, 1.75V/cell, 25°C/77°F)
	26.8 AH/8.93A (3hr, 1.75V/cell, 25°C/77°F)
	22.0 AH/22.0A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	525A (5s)
Internal Resistance	Approx 12mΩ
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 10.5A. 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

- ◆ 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	66.65	51.18	42.40	36.66	28.35	20.88	17.60	10.41	8.14	6.62	5.40	4.69	3.778	3.157	1.733
1.80V/cell	89.47	65.40	51.23	43.33	33.45	24.29	19.72	11.36	8.76	7.07	5.80	5.03	4.008	3.255	1.750
1.75V/cell	100.87	71.87	55.95	46.62	34.72	25.20	20.63	11.78	8.93	7.23	5.95	5.16	4.078	3.343	1.768
1.70V/cell	111.08	78.33	59.74	48.99	36.14	26.21	21.28	12.08	9.17	7.42	6.10	5.27	4.135	3.409	1.799
1.65V/cell	122.49	84.53	63.52	52.05	38.13	26.87	21.77	12.25	9.57	7.68	6.27	5.39	4.200	3.479	1.824
1.60V/cell	135.10	91.77	67.94	55.44	40.25	28.00	21.98	12.78	9.86	7.92	6.48	5.50	4.241	3.518	1.834

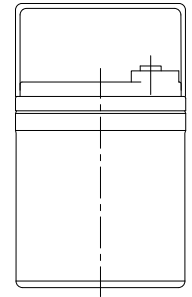
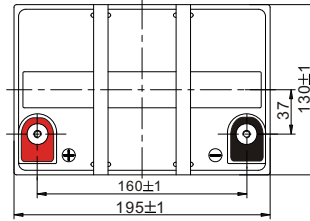
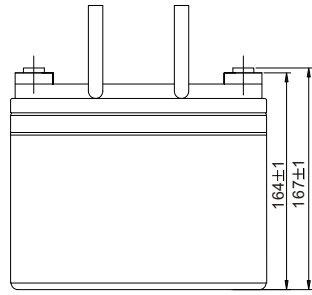
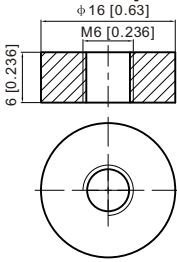
## Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	121.9	94.5	79.1	69.10	54.03	40.14	33.95	20.21	15.88	12.95	10.59	9.21	7.460	6.248	3.432
1.80V/cell	161.8	119.4	94.3	80.5	62.77	46.32	37.83	21.92	16.99	13.75	11.31	9.84	7.890	6.432	3.462
1.75V/cell	178.6	129.1	101.7	85.8	64.63	47.61	39.39	22.64	17.23	14.01	11.57	10.08	8.008	6.596	3.492
1.70V/cell	191.2	137.5	107.1	89.4	66.90	49.32	40.50	23.16	17.68	14.35	11.84	10.27	8.112	6.723	3.552
1.65V/cell	207.9	147.0	113.0	94.3	69.99	50.11	41.15	23.36	18.35	14.79	12.13	10.47	8.219	6.850	3.596
1.60V/cell	224.0	156.0	118.9	99.4	73.38	51.94	41.32	24.24	18.82	15.21	12.49	10.66	8.282	6.914	3.611

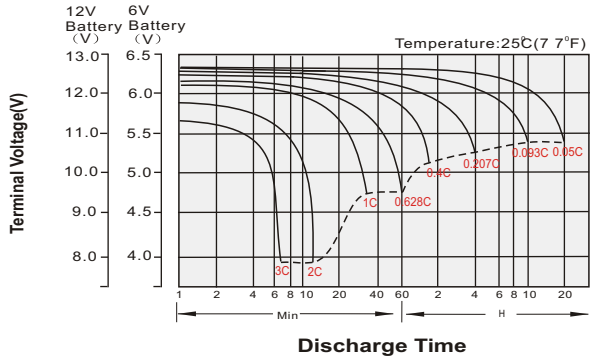
# Dimensions

## T6 Terminal

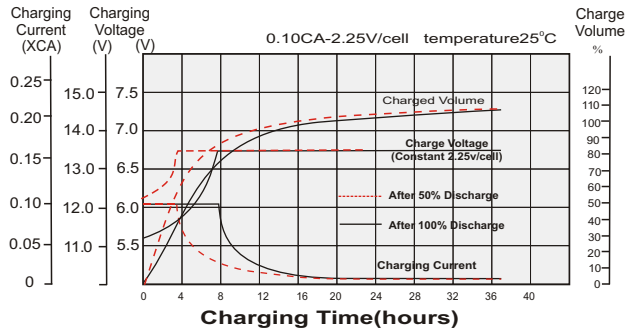
Unit: mm [inches]



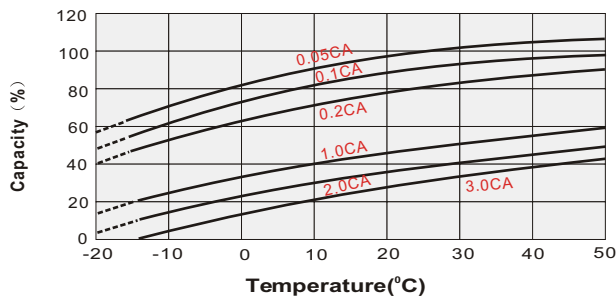
## Discharge Characteristics



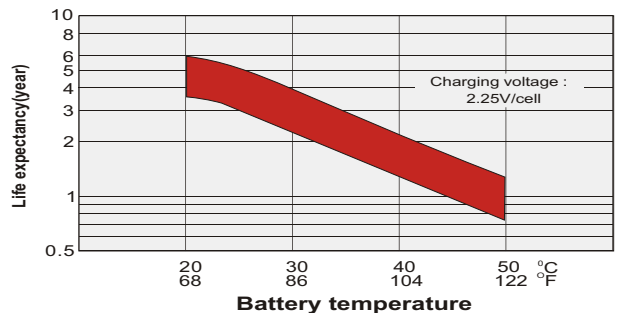
## Float Charging Characteristics



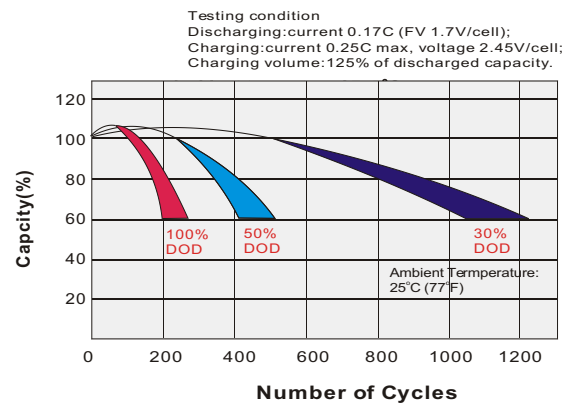
## Temperature Effects in Relation to Batter Capacity



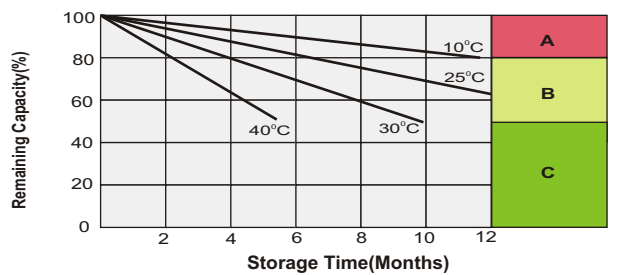
## Effect of Temperature on Long Term Float Life



## 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.