



valve regulated
sealed lead acid type
rechargeable battery

sunbattery®

MB12-35HC(12V35AH)

Specification

| | | | |
|----------------------------------|---|-------------------------------|--|
| Nominal Voltage | 12V | | |
| Nominal Capacity(10HR) | 33.0AH | | |
| 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 11.20 Kg (24.7lbs) | |
| Terminal | T6 | | |
| Container Material | ABS | | |
| Rated Capacity | 35.4AH/1.77A | (20hr, 1.80V/cell, 25°C/77°F) | |
| | 33.0AH/3.30A | (10hr, 1.80V/cell, 25°C/77°F) | |
| | 28.9AH/5.79A | (5hr, 1.75V/cell, 25°C/77°F) | |
| | 26.2AH/8.75A | (3hr, 1.75V/cell, 25°C/77°F) | |
| | 21.3AH/21.3A | (1hr, 1.60V/cell, 25°C/77°F) | |
| Max. Discharge Current | 495A (5s) | | |
| Internal Resistance | Approx 11.0mΩ | | |
| 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 9.9A. 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.

| | | |
|----------|-----------|--|
| MH26866 | ETL SEMKO | |
| ISO14001 | ISO9001 | |

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 | 48.3 | 40.7 | 35.5 | 25.6 | 20.3 | 16.5 | 10.2 | 7.98 | 6.46 | 5.25 | 4.58 | 3.74 | 3.12 | 1.75 |
| 1.80V/cell | 61.7 | 49.1 | 42.0 | 30.2 | 23.6 | 18.5 | 11.2 | 8.59 | 6.90 | 5.64 | 4.91 | 3.97 | 3.30 | 1.77 |
| 1.75V/cell | 67.8 | 53.7 | 45.2 | 31.3 | 24.5 | 19.3 | 11.6 | 8.75 | 7.06 | 5.79 | 5.05 | 4.04 | 3.33 | 1.79 |
| 1.70V/cell | 73.9 | 57.3 | 47.5 | 32.6 | 25.5 | 19.9 | 12.0 | 8.99 | 7.24 | 5.93 | 5.15 | 4.09 | 3.37 | 1.82 |
| 1.65V/cell | 79.8 | 60.9 | 50.4 | 34.4 | 26.1 | 20.6 | 12.4 | 9.37 | 7.49 | 6.10 | 5.27 | 4.16 | 3.44 | 1.84 |
| 1.60V/cell | 86.6 | 65.1 | 53.7 | 36.3 | 27.2 | 21.3 | 12.8 | 9.66 | 7.73 | 6.30 | 5.38 | 4.20 | 3.47 | 1.85 |

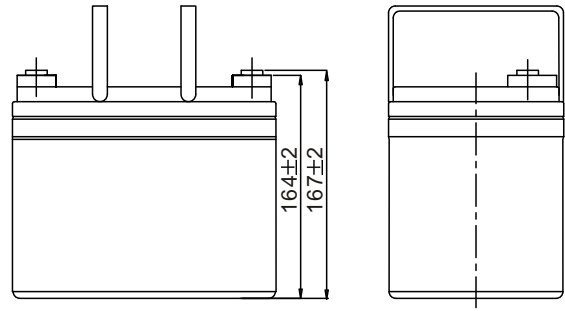
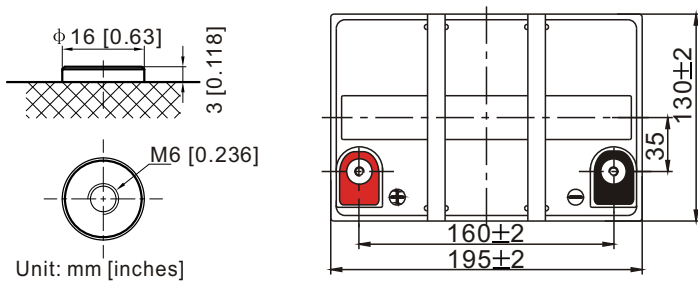
Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 90.1 | 76.6 | 67.7 | 49.1 | 39.3 | 32.0 | 19.9 | 15.6 | 12.7 | 10.3 | 9.05 | 7.40 | 6.17 | 3.51 |
| 1.80V/cell | 113.6 | 91.2 | 78.8 | 57.3 | 45.3 | 35.6 | 21.6 | 16.7 | 13.4 | 11.0 | 9.67 | 7.84 | 6.53 | 3.53 |
| 1.75V/cell | 123.3 | 98.7 | 84.1 | 59.2 | 46.8 | 37.1 | 22.4 | 17.0 | 13.7 | 11.3 | 9.92 | 7.96 | 6.59 | 3.56 |
| 1.70V/cell | 132.6 | 104.6 | 87.9 | 61.3 | 48.5 | 38.2 | 23.2 | 17.4 | 14.1 | 11.6 | 10.1 | 8.07 | 6.65 | 3.63 |
| 1.65V/cell | 142.0 | 110.5 | 92.9 | 64.4 | 49.6 | 39.3 | 23.8 | 18.1 | 14.5 | 11.9 | 10.3 | 8.19 | 6.78 | 3.67 |
| 1.60V/cell | 151.6 | 116.8 | 97.9 | 67.3 | 51.2 | 40.4 | 24.4 | 18.5 | 14.9 | 12.2 | 10.5 | 8.26 | 6.85 | 3.68 |

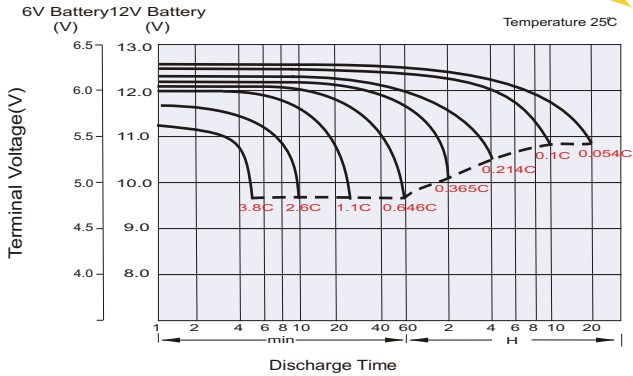
Specifications subject to change without notice.



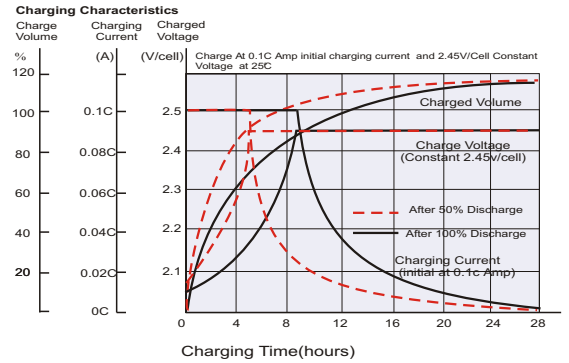
Dimensions



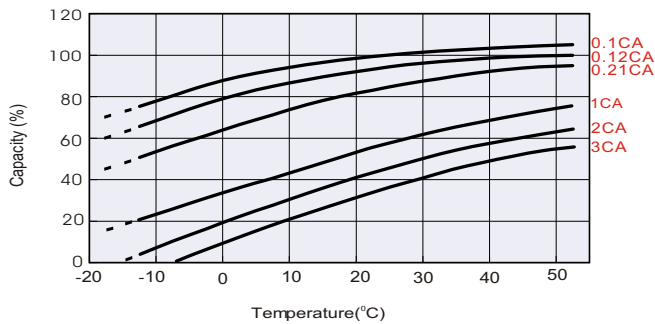
Discharge Characteristics



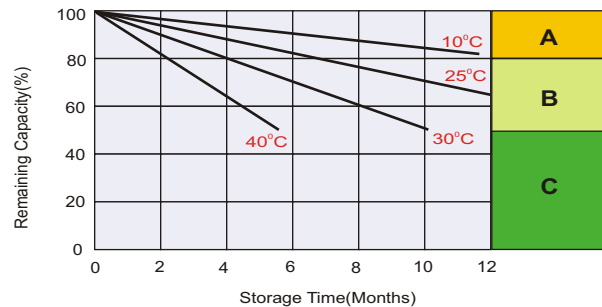
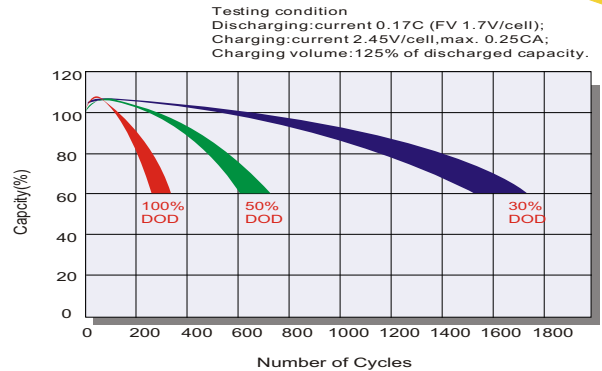
Charging Characteristics (cycle use)



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