

EDC12-40 (12V 45Ah)

Specifications

| | | |
|----------------------------------|---|--------------------------------|
| Nominal Voltage | 12V | |
| Nominal Capacity(20 Hr) | 45Ah | |
| Dimension | Length | 198±1mm(7.80 inches) |
| | Width | 166±1mm(6.54 inches) |
| | Container Height | 174±1mm(6.85 inches) |
| | Total Height (With terminal) | 174±1mm(6.85 inches) |
| | Approx Weight | Approx 14.2 kgs (31.31 lbs) |
| Design life | 12 years | |
| Terminal | M6 | |
| Container Material | ABS | |
| Rated Capacity | 45.0Ah/2.25A | (20hr, 1.75V/Cell, 25 °C/77°F) |
| | 40.5Ah/4.05A | (10hr, 1.80V/Cell, 25 °C/77°F) |
| | 35.0Ah/7.00A | (5hr, 1.75V/Cell, 25 °C/77°F) |
| | 22.0Ah/22.0A | (1hr, 1.60V/Cell, 25 °C/77°F) |
| Max. Discharge Current | 450A(5s) | |
| Internal Resistance | Appro≤10.6mΩ | |
| Operating Temp. Range | Discharge: -20 °C~50 °C | |
| | Charge: 0 °C~40 °C | |
| | Storage: -20 °C~50 °C | |
| 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-20mV/C | |
| | Standby Use No limit on Intital 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 | EDC series batteries may be stored for up to 6 months at25 °C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. | |



Application

- ◆ All purpose
- ◆ Uninterruptable Power Supply(UPS)
- ◆ Electric Power System(EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and securitysystem
- ◆ Electronic apparatus & equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto controlsystem

Constant Current Discharge (Amperes) at 25 °C (77F)

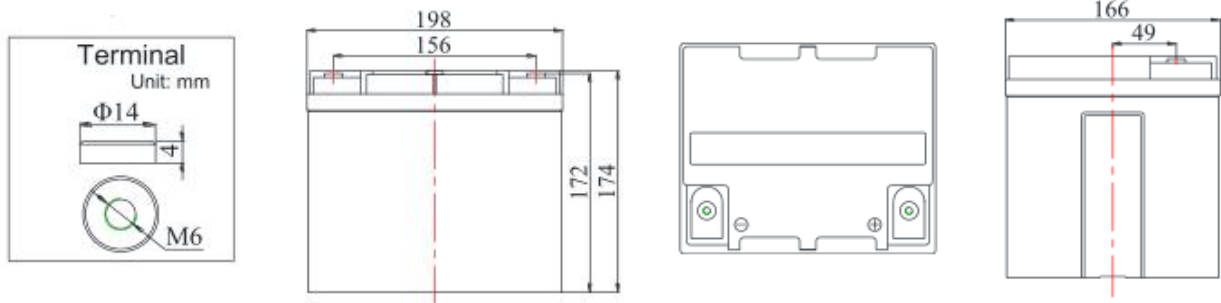
| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 6h | 8h | 10h | 20h |
|----------|-------|-------|-------|------|------|------|-----|-----|-----|-----|------|
| 1.60V | 75.8 | 44.6 | 33.8 | 26.8 | 15.8 | 11.6 | 7.8 | 6.8 | 5.3 | 4.4 | 2.33 |
| 1.67V | 71.6 | 42.3 | 32.5 | 26.0 | 15.2 | 11.2 | 7.7 | 6.7 | 5.3 | 4.3 | 2.31 |
| 1.70V | 67.2 | 41.1 | 31.3 | 25.0 | 14.8 | 10.9 | 7.5 | 6.6 | 5.2 | 4.3 | 2.28 |
| 1.75V | 63.0 | 39.3 | 29.9 | 24.0 | 14.4 | 10.7 | 7.4 | 6.4 | 5.1 | 4.2 | 2.25 |
| 1.80V | 59.1 | 37.8 | 28.9 | 23.1 | 13.9 | 10.3 | 7.2 | 6.3 | 5.0 | 4.2 | 2.23 |

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

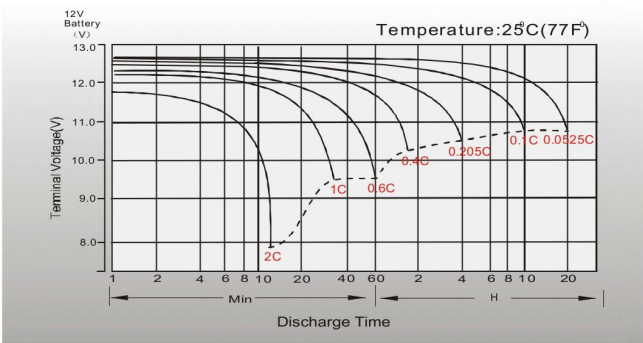
| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 6h | 8h | 10h | 20h |
|----------|-------|-------|-------|------|------|------|------|------|------|-----|-----|
| 1.60V | 144.9 | 88.7 | 64.2 | 51.4 | 29.9 | 22.1 | 15.1 | 13.1 | 10.4 | 8.6 | 4.6 |
| 1.67V | 138.7 | 83.1 | 62.0 | 50.0 | 29.1 | 21.5 | 14.8 | 12.9 | 10.3 | 8.5 | 4.6 |
| 1.70V | 129.2 | 81.3 | 60.1 | 48.3 | 28.4 | 21.0 | 14.6 | 12.8 | 10.2 | 8.4 | 4.5 |
| 1.75V | 121.3 | 77.4 | 57.7 | 46.5 | 27.7 | 20.6 | 14.4 | 12.6 | 10.1 | 8.4 | 4.5 |
| 1.80V | 113.8 | 74.3 | 55.7 | 45.0 | 26.8 | 20.0 | 14.1 | 12.3 | 10.0 | 8.3 | 4.4 |

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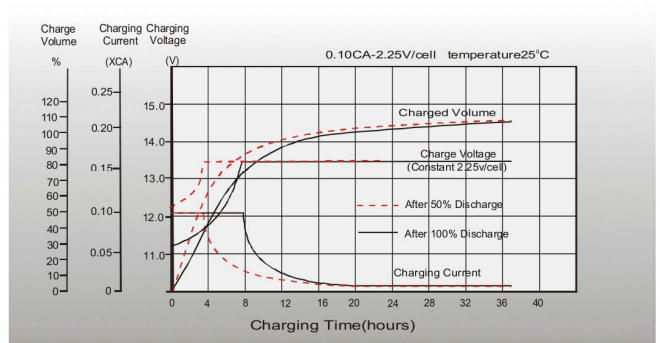
Dimensions



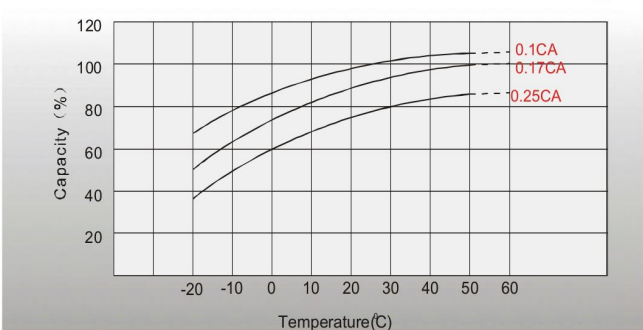
Discharge Characteristics



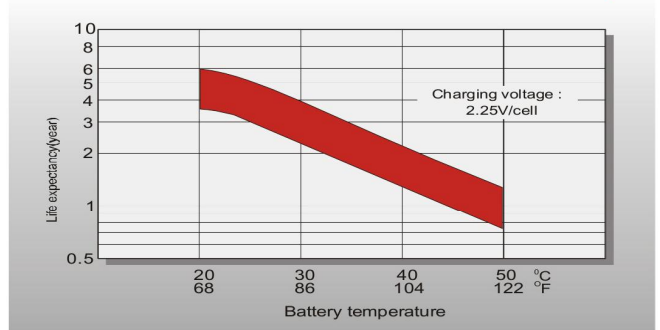
Float Charging Characteristics



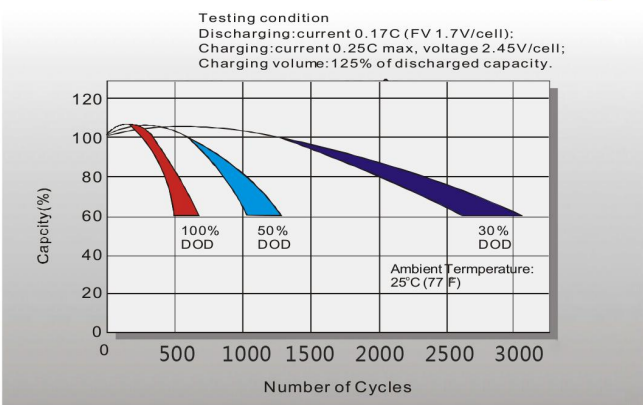
Temperature Effects in Relation to Battery Capacity



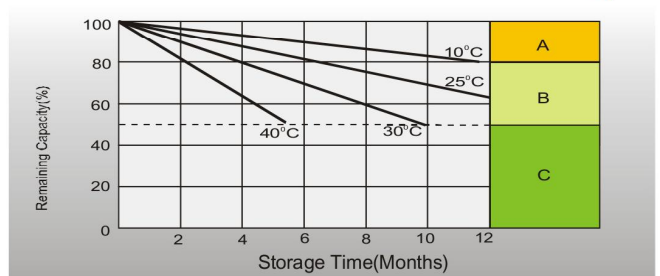
Effect of Temperature on Long Term Float Life



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.

Specifications subject to change without prior notice.