# EV12-10(12V10Ah)

RITAR®

## Specification

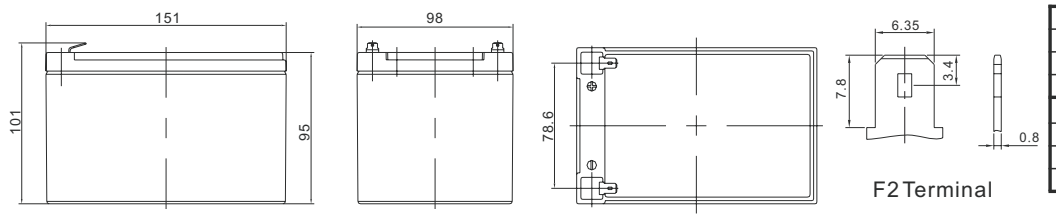
| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 10Ah@20hr-rate to 1.75V per cell @25℃ |
| **Weight** | Approx. 3.85 Kg (Tolerance±4%) |
| **Internal Resistance** | Approx. 15.0 mΩ |
| **Terminal** | F1/F2 |
| **Max. Discharge Current** | 150A (5 sec) |
| **Cold Cranking Ampere(CCA)** | 100A |
| **Maximum Charging Current** | 3.0A |
| **Reference Capacity** | C3 7.80AH<br>C5 8.60AH<br>C10 9.40AH<br>C20 10.0AH |
| **Float Charging Voltage** | 13.6 V~13.8 V @ 25℃<br>Temperature Compensation: -3mV/℃/Cell |
| **Cycle Use Voltage** | 14.6 V~14.8 V @ 25℃<br>Temperature Compensation: -4mV/℃/Cell |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃.Please charged batteries before using. |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

EV(Electric Vehicle)series is specially designed for frequent discharge deep cycle application.By using the specially designed active material,strong grids and thick plate construction,the EV series battery offers reliable performance in high load situations and could provide competitive cycle performance.Suitable for Electric Vehicle and Golf cart; Industrial equipment,Floor machines,Forklifts, Aerial lifts,and Robotics; Marine, RV, and no-idle solutions; Mobility and Medical equipment;and most outdoor application.

ISO 9001 ISO 14001 OHSAS 18001

MH 28539 G4M20206-0910-E-16

## Dimensions




| | |
|---|---|
| Length | 151±2mm (5.94 inches) |
| Width | 98±2mm (3.86 inches) |
| Height | 95±2mm (3.74 inches) |
| Total Height | 101±2mm (3.98 inches) |
| Terminal | Value |
| M5 | 6~7 N*m |
| M6 | 8~10 N*m |
| M8 | 10~12 N*m |

Unit: mm

## Constant Current Discharge Characteristics : A(25℃)

| F.V/Time | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 11.74 | 6.89 | 3.93 | 2.78 | 2.17 | 1.81 | 1.22 | 1.01 | 0.520 |
| 1.65V | 11.49 | 6.76 | 3.86 | 2.73 | 2.14 | 1.79 | 1.21 | 1.00 | 0.515 |
| 1.70V | 11.16 | 6.59 | 3.77 | 2.68 | 2.10 | 1.76 | 1.19 | 0.99 | 0.509 |
| 1.75V | 10.72 | 6.35 | 3.65 | 2.60 | 2.05 | 1.72 | 1.17 | 0.97 | 0.500 |
| 1.80V | 10.11 | 6.03 | 3.49 | 2.49 | 1.97 | 1.66 | 1.13 | 0.94 | 0.488 |
| 1.85V | 9.25 | 5.57 | 3.25 | 2.34 | 1.86 | 1.58 | 1.08 | 0.91 | 0.470 |

## Constant Power Discharge Characteristics : WPC(25℃)

| F.V/Time | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 21.32 | 12.88 | 7.45 | 5.30 | 4.17 | 3.49 | 2.39 | 1.99 | 1.02 |
| 1.65V | 21.18 | 12.77 | 7.38 | 5.25 | 4.13 | 3.47 | 2.37 | 1.97 | 1.02 |
| 1.70V | 20.70 | 12.49 | 7.23 | 5.16 | 4.06 | 3.42 | 2.34 | 1.95 | 1.00 |
| 1.75V | 20.08 | 12.10 | 7.03 | 5.03 | 3.97 | 3.35 | 2.29 | 1.91 | 0.99 |
| 1.80V | 19.13 | 11.54 | 6.74 | 4.84 | 3.84 | 3.25 | 2.23 | 1.86 | 0.97 |
| 1.85V | 17.68 | 10.73 | 6.31 | 4.56 | 3.64 | 3.09 | 2.13 | 1.79 | 0.93 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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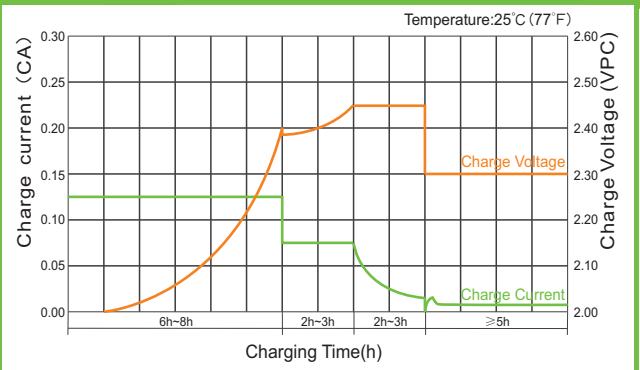
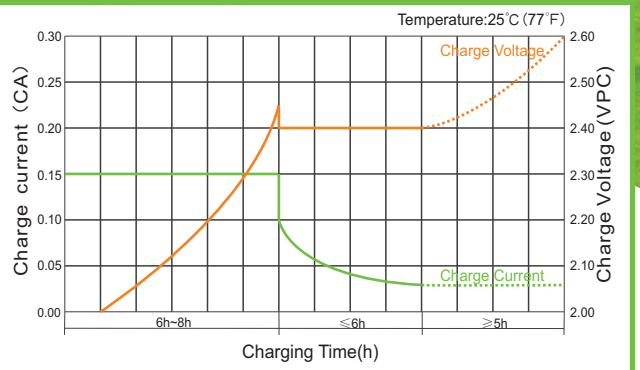
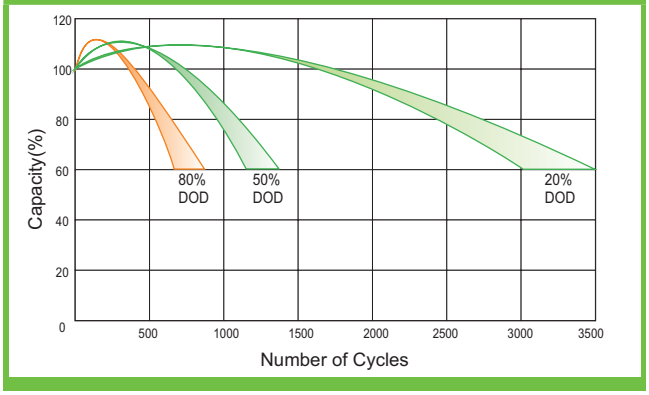
## Charge Characteristic Curve for Cycle Use(IIUU)



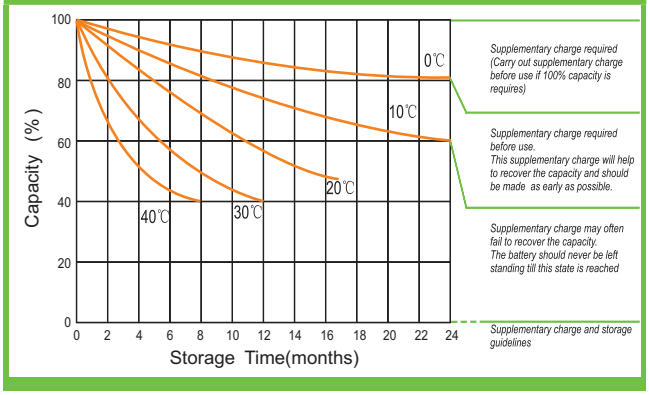

## Charge Characteristic Curve For Cycle Use(IUI)



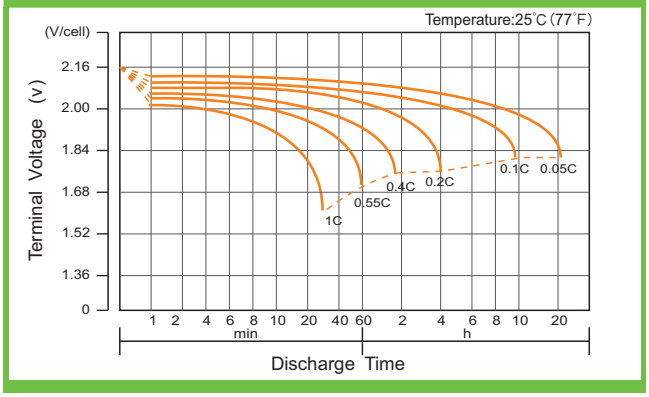

## Cycle Life in Relation to Depth of Discharge



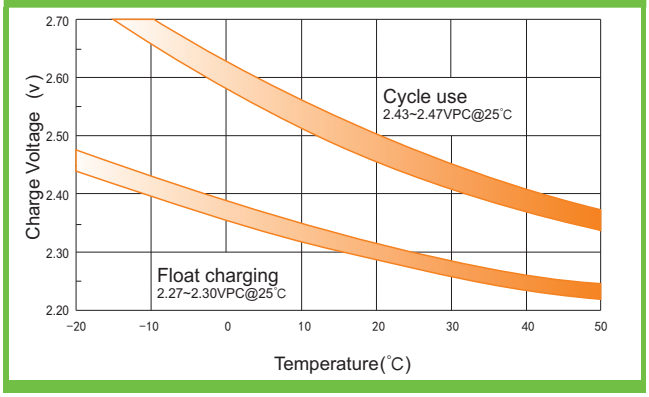

## Storage Characteristics



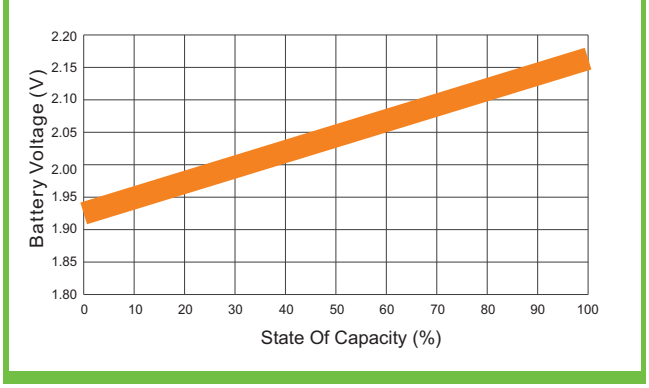

## Discharge Characteristics Curve



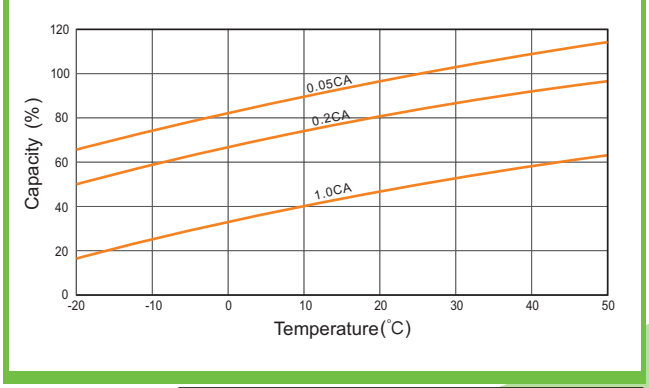

## Relationship Between Charging Voltage and Temperature




## Relationship of OCV And State of Charge(20℃)




## Temperature Effects on Capacity




(Note) All above information shall be changed without prior notice,
Ritar reserves the right to explain and update the latest information.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