# EV12-200(12V200Ah)

RITAR®

## Specification

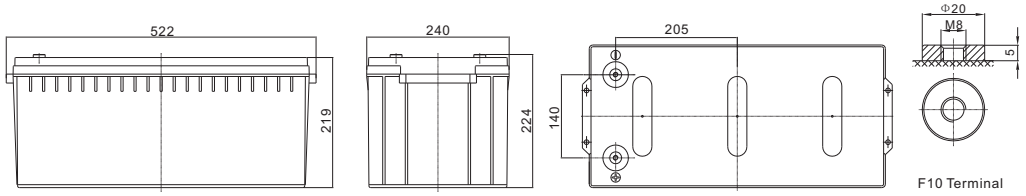
| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12V |
| **Capacity** | 200Ah@20hour-rate to 1.75V per cell @25℃ |
| **Weight** | Approx. 61.0 Kg (Tolerance±5%) |
| **Internal Resistance** | ≤3.8 mΩ (Full Charge Condition @25℃) |
| **Terminal** | Default F10(M8), F16(M8)&L6 Optional |
| **Max. Discharge Current** | 2000A (5 sec) |
| **Cold Cranking Ampere(CCA)** | 700A |
| **Maxi. Charging Current** | 60.0A |
| **Reference Capacity** | $C_3$ 148.5Ah<br>$C_5$ 170.0Ah<br>$C_{10}$ 190.0Ah<br>$C_{20}$ 200.0Ah |
| **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. It is suitable for Electric Vehicle and Golf cart, Floor Machines, Forklifts, Aerial lifts, Robotics, Marine, RV, Mobility and Medical Equipment, and most outdoor application.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD210316008503EC

## Dimensions




| | |
|---|---|
| Length | 522±2mm (20.6 inches) |
| Width | 240±2mm (9.45 inches) |
| Height | 219±2mm (8.62 inches) |
| Total Height | 224±2mm (8.82 inches) |
| Terminal | Value |
| M5 | 6~7 N*m |
| M6 | 8~10 N*m |
| M8 | 10~12 N*m |

Unit: mm

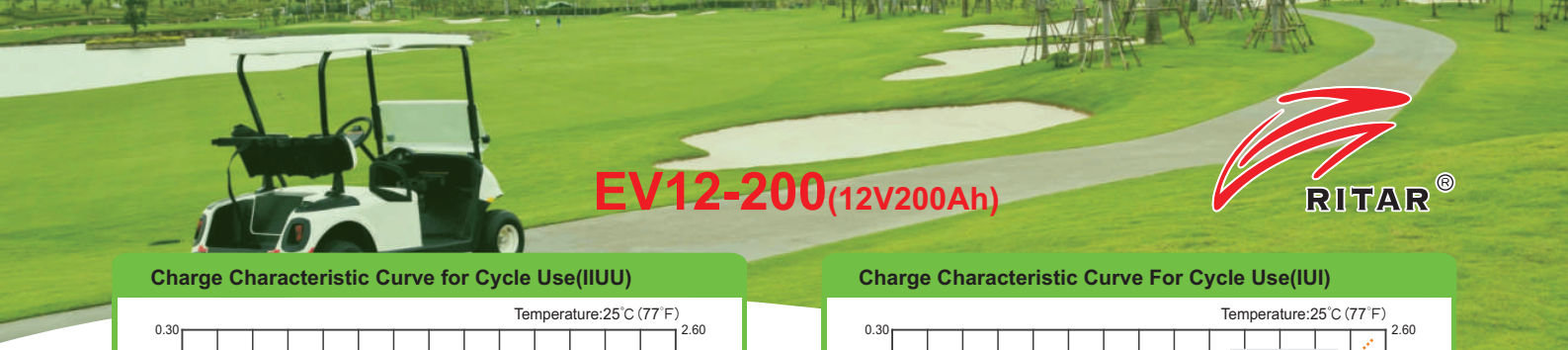
### Constant Current Discharge Characteristics : A(25℃)

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 456.9 | 362.8 | 221.2 | 117.3 | 71.7 | 55.8 | 44.3 | 37.7 | 24.8 | 20.0 | 10.4 |
| 1.65V | 431.7 | 328.6 | 193.0 | 113.3 | 69.5 | 54.1 | 43.1 | 36.7 | 24.5 | 19.8 | 10.2 |
| 1.70V | 397.5 | 307.8 | 184.5 | 109.6 | 67.2 | 52.6 | 42.0 | 35.8 | 24.1 | 19.5 | 10.1 |
| 1.75V | 363.8 | 286.4 | 176.3 | 105.6 | 64.8 | 51.1 | 40.9 | 34.9 | 23.8 | 19.2 | 10.0 |
| 1.80V | 329.3 | 264.5 | 168.5 | 101.6 | 62.5 | 49.5 | 39.7 | 34.0 | 23.4 | 19.0 | 9.90 |
| 1.85V | 269.2 | 219.5 | 145.2 | 91.1 | 57.3 | 45.8 | 36.9 | 31.7 | 22.0 | 17.9 | 9.40 |

### Constant Power Discharge Characteristics : W/Cell(25℃)

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 776.6 | 634.3 | 401.7 | 220.4 | 136.0 | 106.6 | 85.1 | 72.7 | 48.4 | 39.4 | 20.5 |
| 1.65V | 748.0 | 583.0 | 354.3 | 214.1 | 132.3 | 103.8 | 83.1 | 71.1 | 48.0 | 39.0 | 20.2 |
| 1.70V | 701.3 | 554.2 | 342.0 | 208.4 | 128.6 | 101.4 | 81.2 | 69.5 | 47.4 | 38.4 | 20.0 |
| 1.75V | 653.5 | 523.3 | 330.3 | 202.0 | 124.7 | 98.8 | 79.4 | 68.0 | 46.8 | 38.0 | 19.8 |
| 1.80V | 601.9 | 490.0 | 318.9 | 195.4 | 120.9 | 96.1 | 77.4 | 66.5 | 46.1 | 37.5 | 19.6 |
| 1.85V | 500.6 | 412.4 | 277.3 | 176.4 | 111.3 | 89.3 | 72.2 | 62.2 | 43.4 | 35.4 | 18.6 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The $C_{20}$ should reach 95% after the first cycle and 100% after the third cycle.



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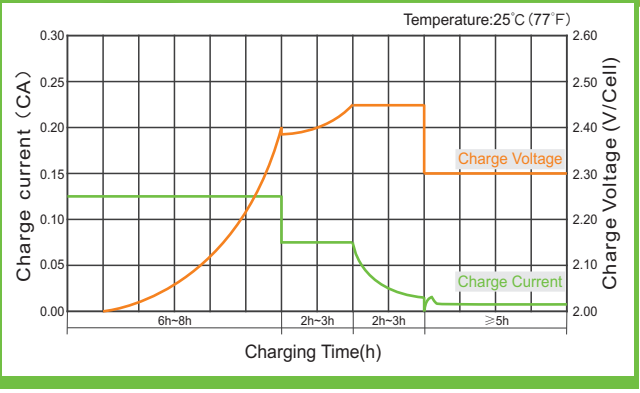
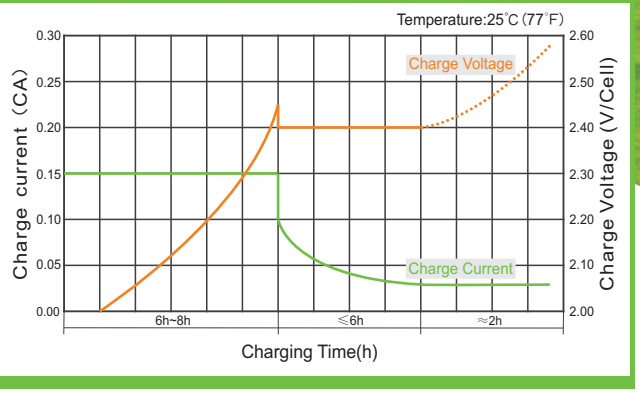
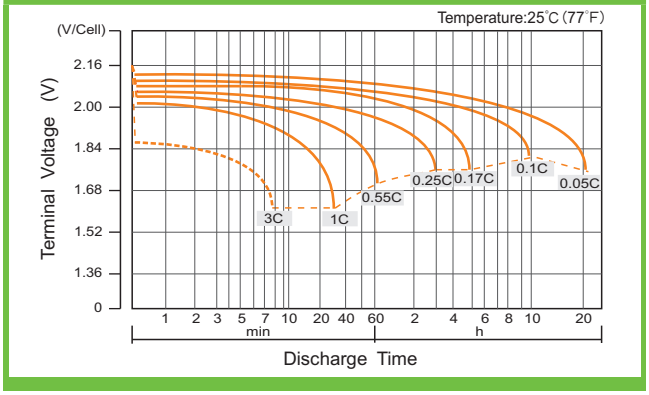
## Charge Characteristic Curve for Cycle Use(IIUU)



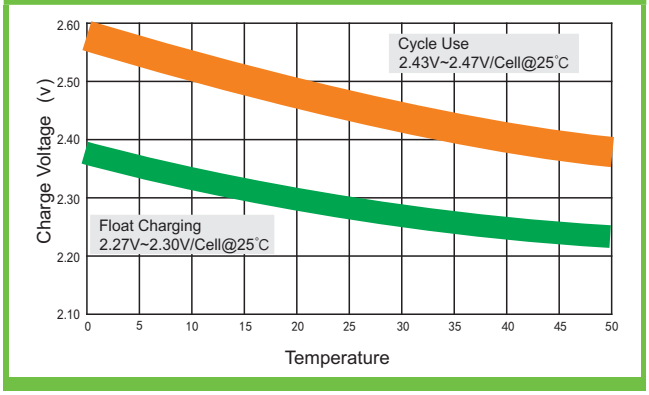

## Charge Characteristic Curve For Cycle Use(IUI)



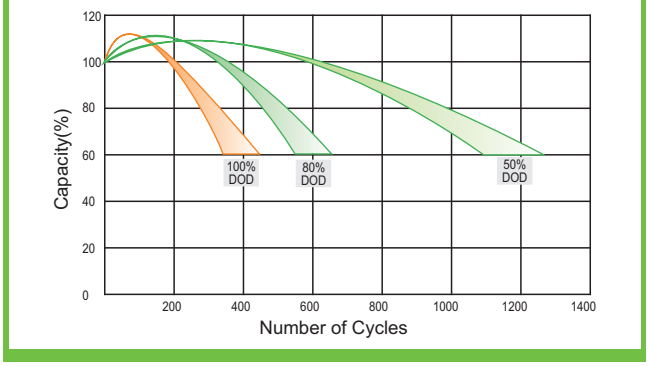

## Discharge Characteristics Curve



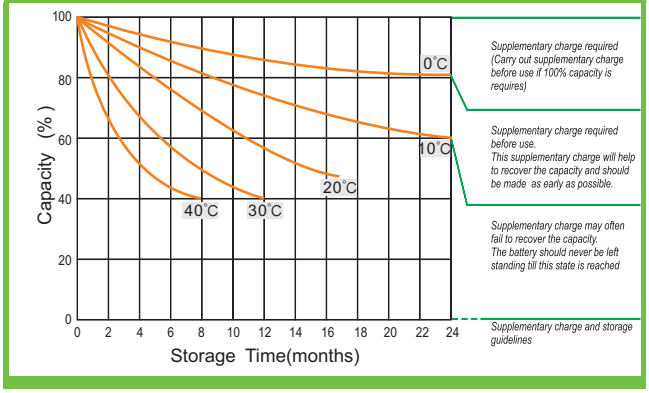

## Relationship Between Charging Voltage and Temperature



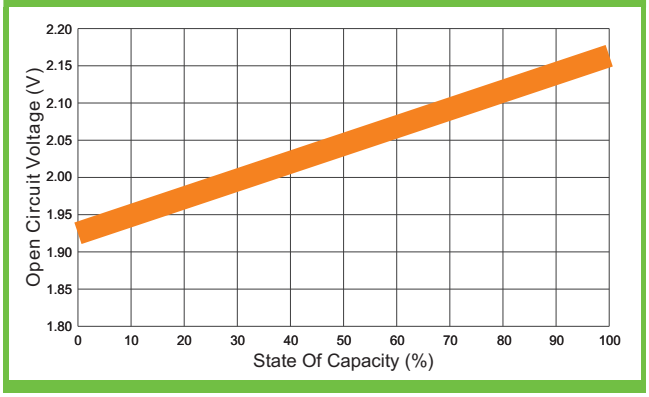

## Cycle Life in Relation to Depth of Discharge



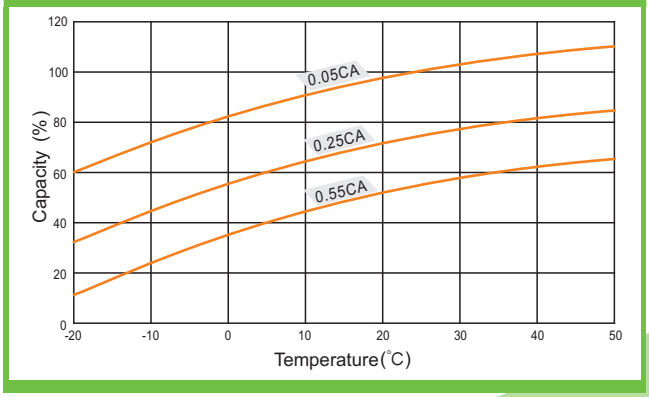

## Storage Characteristics




## 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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