# RA12-120SA(12V110Ah)

## Specification

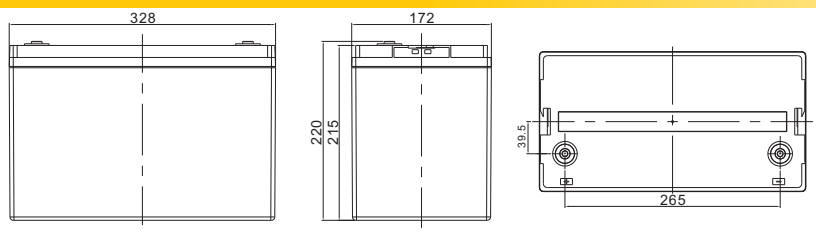
| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Nominal Capacity** | 110Ah@10hour-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 30.5 Kg (Tolerance±2.0%) |
| **Internal Resistance** | Approx. 4.2 mΩ |
| **Terminal** | F12(M8) |
| **Max. Discharge Current** | 1100A (5 sec) |
| **Short Circuit Current** | 2250A |
| **Design Life** | 12 years (Float charging) |
| **Recommended Maximum Charging Current** | 33 A |
| **Reference Capacity** | C3 85.5AH<br>C5 98.5AH<br>C10 110.0AH<br>C20 116.4AH |
| **Standby Use 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 charge batteries before using. |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS and YDT standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

IQNet CERTIFICATE IQNet CERTIFICATE

MH28539 G4M20206-0910-E-16

## Dimensions




F12 Terminal

| | |
|---|---|
| Length | 328±2mm (12.9 inches) |
| Width | 172±2mm (6.77 inches) |
| Height | 215±2mm (8.46 inches) |
| Total Height | 220±2mm (8.66 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 | 251.6 | 196.0 | 115.4 | 68.4 | 41.0 | 30.1 | 24.4 | 20.6 | 13.8 | 11.7 | 6.01 |
| 1.65V | 244.1 | 190.9 | 112.9 | 67.1 | 40.4 | 29.7 | 24.1 | 20.4 | 13.6 | 11.6 | 5.97 |
| 1.70V | 234.2 | 184.1 | 109.5 | 65.5 | 39.6 | 29.2 | 23.7 | 20.1 | 13.5 | 11.5 | 5.90 |
| 1.75V | 221.5 | 175.4 | 105.1 | 63.3 | 38.5 | 28.5 | 23.2 | 19.7 | 13.2 | 11.3 | 5.82 |
| 1.80V | 205.3 | 164.0 | 99.5 | 60.4 | 37.1 | 27.5 | 22.5 | 19.1 | 12.9 | 11.0 | 5.70 |
| 1.85V | 184.9 | 149.8 | 92.2 | 56.7 | 35.3 | 26.3 | 21.6 | 18.4 | 12.5 | 10.7 | 5.55 |

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

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V | 434.0 | 347.8 | 212.8 | 129.8 | 78.8 | 58.3 | 47.6 | 40.4 | 27.3 | 23.4 | 12.0 |
| 1.65V | 432.3 | 345.9 | 211.2 | 128.8 | 78.3 | 57.9 | 47.3 | 40.1 | 27.1 | 23.2 | 11.9 |
| 1.70V | 419.5 | 336.5 | 206.1 | 126.0 | 76.9 | 57.0 | 46.6 | 39.6 | 26.8 | 22.9 | 11.8 |
| 1.75V | 403.8 | 325.1 | 199.9 | 122.4 | 75.2 | 55.9 | 45.7 | 38.9 | 26.4 | 22.6 | 11.7 |
| 1.80V | 380.7 | 308.5 | 191.0 | 117.3 | 72.9 | 54.3 | 44.5 | 37.9 | 25.8 | 22.1 | 11.5 |
| 1.85V | 349.1 | 285.6 | 178.8 | 110.9 | 69.7 | 52.1 | 42.8 | 36.6 | 25.0 | 21.4 | 11.2 |

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

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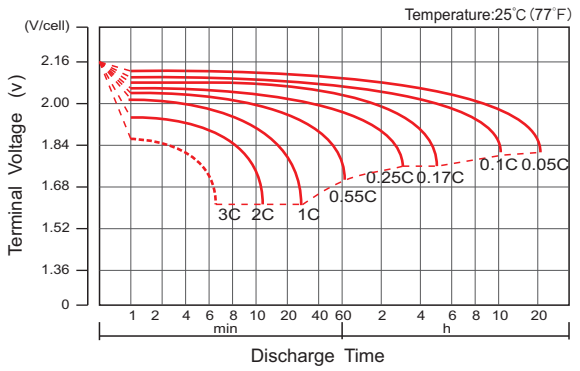
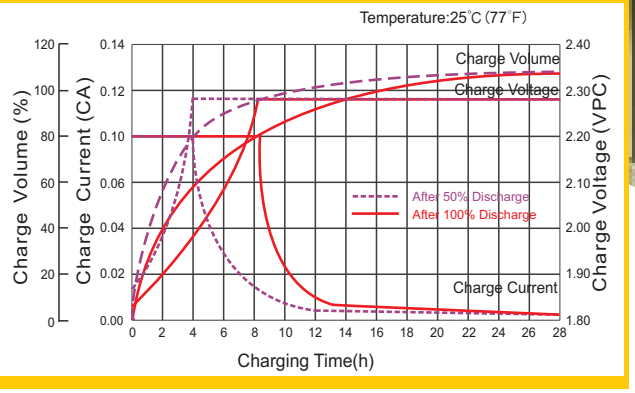
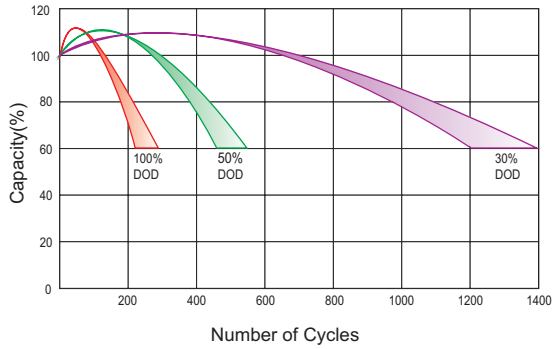
## Discharge Characteristics Curve



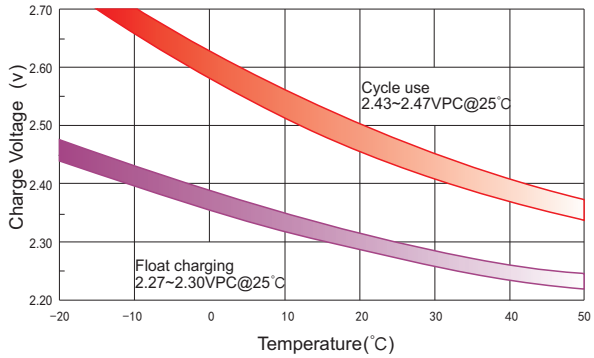

## Charge Characteristic Curve For Standby Use



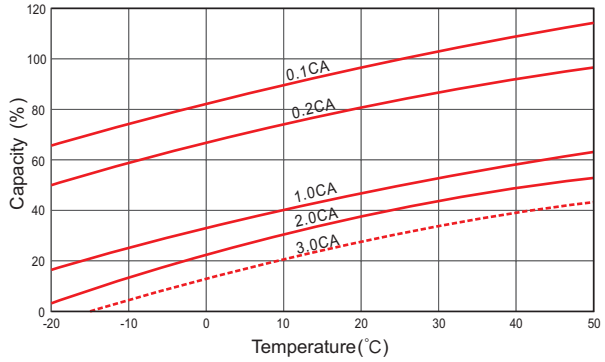

## Cycle Life In Relation To Depth Of Discharge



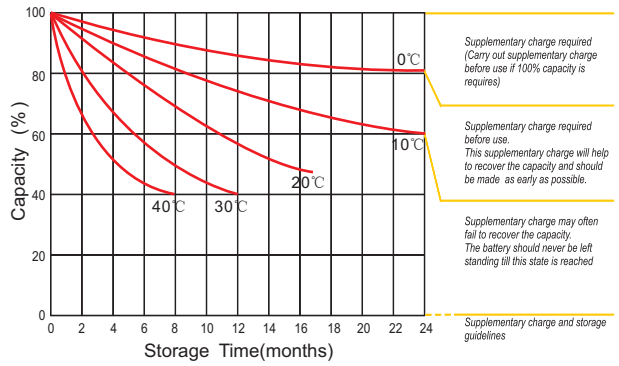

## Relationship Between Charging Voltage And Temperature



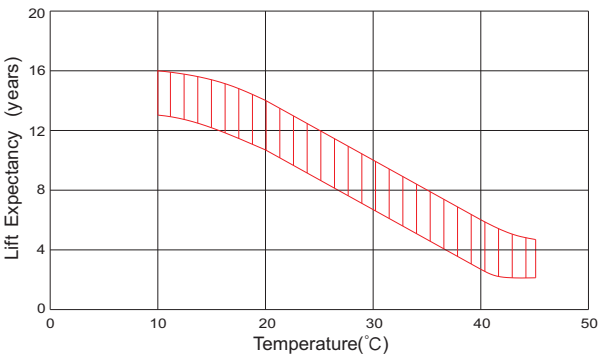

## Temperature Effects On Capacity



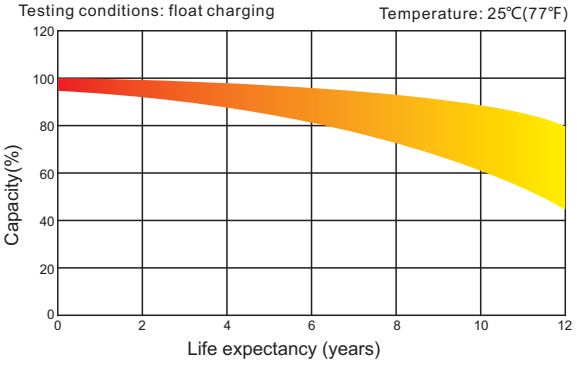

## Storage Characteristics




## Effect Of Temperature On Long Term Life




## Life Characteristics Of Standby Use




(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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