

# RA12-40 (12V40Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 40Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 13.0 Kg(Tolerance±3%) |
| **Max. Discharge Current** | 400A (5 sec) |
| **Internal Resistance** | Approx. 8 mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current** | 12 A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F4/F11 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

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CERTIFICATE

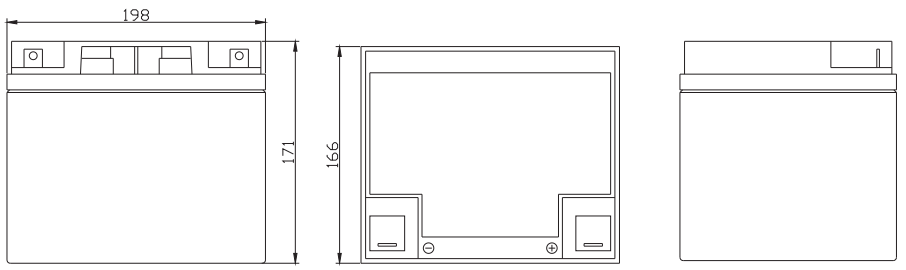
ISO 14001:2004 Standard

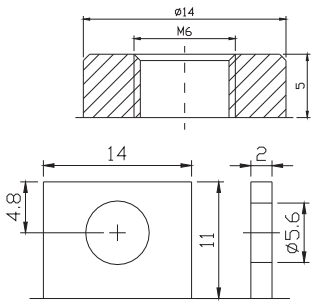
CERTIFICATE

OHSAS 18001:1999 Standard

## Dimensions

**Unit: mm** Dimension: 198(L)×166(W) ×171(H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 140.1 | 103.12 | 76.92 | 40.19 | 24.97 | 15.41 | 10.48 | 8.45 | 7.01 | 4.62 | 4.16 | 2.20 |
| 10.0V | 136.0 | 98.12 | 75.35 | 39.67 | 24.64 | 15.10 | 10.28 | 8.33 | 6.95 | 4.60 | 4.12 | 2.16 |
| 10.2V | 132.0 | 94.65 | 74.16 | 39.07 | 24.40 | 14.94 | 10.19 | 8.24 | 6.90 | 4.56 | 4.08 | 2.12 |
| 10.5V | 118.5 | 87.34 | 70.61 | 37.99 | 24.10 | 14.75 | 10.10 | 8.12 | 6.85 | 4.52 | 4.04 | 2.08 |
| 10.8V | 107.0 | 79.65 | 65.09 | 36.74 | 23.77 | 14.63 | 9.98 | 7.84 | 6.81 | 4.50 | 4.00 | 2.06 |
| 11.1V | 91.33 | 71.18 | 58.38 | 35.34 | 23.20 | 14.04 | 9.79 | 7.73 | 6.76 | 4.46 | 3.96 | 1.98 |

### *Constant Power Discharge Characteristics: W(25℃)*

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 1478 | 1098 | 838.6 | 460.0 | 289.3 | 180.6 | 123.3 | 101.1 | 84.00 | 55.31 | 49.91 | 26.54 |
| 10.0V | 1448 | 1065 | 825.1 | 455.3 | 286.7 | 178.4 | 121.5 | 99.68 | 83.25 | 55.09 | 49.52 | 26.08 |
| 10.2V | 1432 | 1036 | 815.8 | 451.3 | 285.0 | 177.2 | 121.0 | 98.75 | 82.74 | 54.68 | 49.08 | 25.60 |
| 10.5V | 1304 | 965.1 | 778.2 | 442.1 | 283.2 | 174.9 | 120.0 | 97.42 | 82.08 | 54.21 | 48.60 | 25.12 |
| 10.8V | 1187 | 889.7 | 719.3 | 431.6 | 279.5 | 173.6 | 118.6 | 94.13 | 81.70 | 53.98 | 48.12 | 24.87 |
| 11.1V | 1043 | 804.4 | 647.5 | 419.8 | 275.3 | 167.1 | 116.6 | 92.78 | 81.41 | 53.60 | 47.59 | 23.98 |

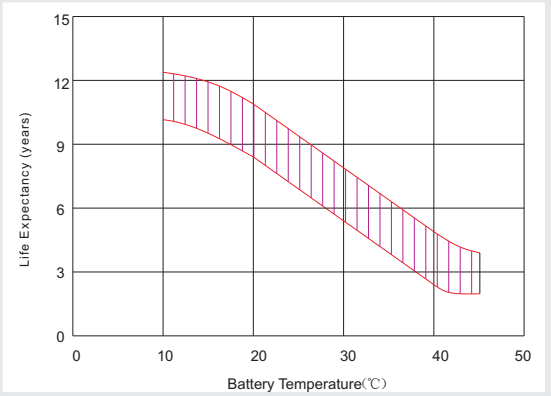
All mentioned values are average values (Tolerance ±2%).

# RA12-40

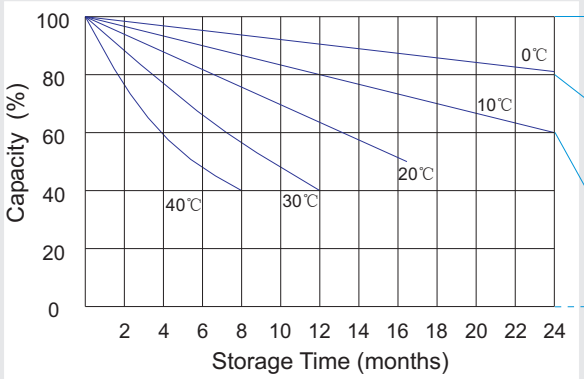
12V40Ah

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## Effect of temperature on long term float life




## Storage characteristic



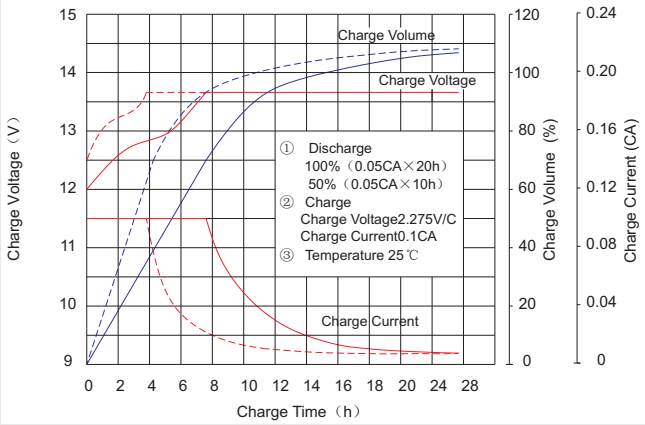

*Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)*

*Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.*

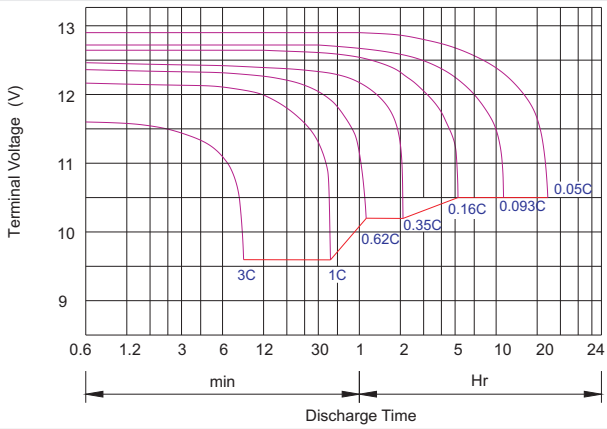
*Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached*

*Supplementary charge and storage guidelines*

## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
|---|---|---|---|
| Discharge Current (A) | （A）≤0.2C | 0.2C＜（A）＜1.0C | （A）≥1.0C |

**Charge the batteries at least once every six months, if they are stored at 25℃.**

Charging Method:

| | |
|---|---|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|---|---|---|---|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N-m | 8~10N-m | 10~12N-m |

## Maintenance & Cautions

**Float Service:**

※ Every month, recommend inspection every battery voltage.

※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.


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2015- Version 0



# RA12-55 (12V55Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

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## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 55Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 18.0 Kg ( Tolerance ±3%) |
| **Max. Discharge Current** | 550A (5 sec) |
| **Internal Resistance** | Approx. 6 mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current** | 16.5 A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F11/F15 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

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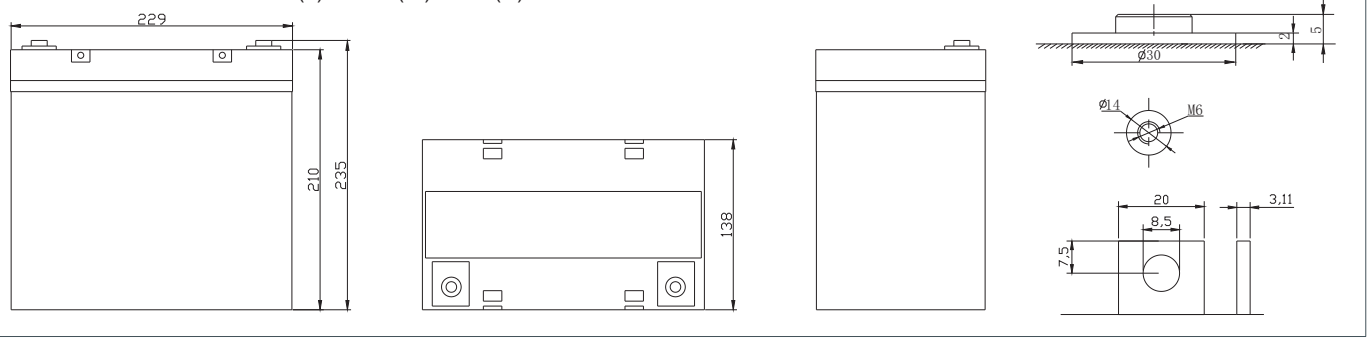
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## Dimensions

**Unit: mm** Dimension: 229(L) ×138(W) ×235(H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 192.6 | 141.8 | 105.8 | 55.26 | 34.33 | 21.20 | 14.40 | 11.61 | 9.64 | 6.35 | 5.72 | 3.03 |
| 10.0V | 187.0 | 134.9 | 103.6 | 54.55 | 33.87 | 20.77 | 14.14 | 11.45 | 9.56 | 6.33 | 5.67 | 2.97 |
| 10.2V | 181.5 | 130.1 | 101.97 | 53.72 | 33.55 | 20.55 | 14.01 | 11.34 | 9.49 | 6.27 | 5.61 | 2.92 |
| 10.5V | 162.9 | 120.1 | 97.09 | 52.24 | 33.14 | 20.28 | 13.89 | 11.17 | 9.41 | 6.21 | 5.56 | 2.86 |
| 10.8V | 147.1 | 109.5 | 89.50 | 50.51 | 32.68 | 20.11 | 13.73 | 10.79 | 9.37 | 6.19 | 5.50 | 2.83 |
| 11.1V | 125.6 | 97.9 | 80.28 | 48.59 | 31.90 | 19.30 | 13.46 | 10.63 | 9.30 | 6.14 | 5.44 | 2.72 |

### *Constant Power Discharge Characteristics: W(25℃)*

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 2032 | 1510 | 1153 | 632.6 | 397.8 | 248.4 | 169.6 | 139.0 | 115.5 | 76.04 | 68.63 | 36.50 |
| 10.0V | 1992 | 1464 | 1135 | 626.0 | 394.2 | 245.3 | 167.1 | 137.1 | 114.5 | 75.75 | 68.09 | 35.86 |
| 10.2V | 1969 | 1425 | 1122 | 620.6 | 391.9 | 243.6 | 166.3 | 135.8 | 113.8 | 75.18 | 67.49 | 35.20 |
| 10.5V | 1792 | 1327 | 1070 | 607.9 | 389.4 | 240.5 | 165.0 | 133.9 | 112.9 | 74.54 | 66.82 | 34.54 |
| 10.8V | 1633 | 1223 | 989.0 | 593.5 | 384.4 | 238.7 | 163.1 | 129.4 | 112.3 | 74.22 | 66.16 | 34.20 |
| 11.1V | 1434 | 1106 | 890.3 | 577.2 | 378.6 | 229.8 | 160.4 | 127.6 | 111.9 | 73.70 | 65.44 | 32.98 |

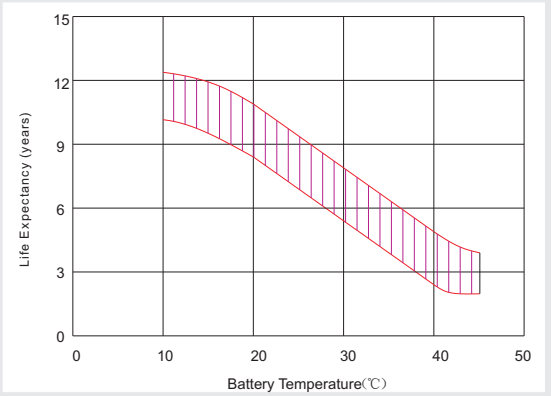
All mentioned values are average values (Tolerance ±2%).

# RA12-55

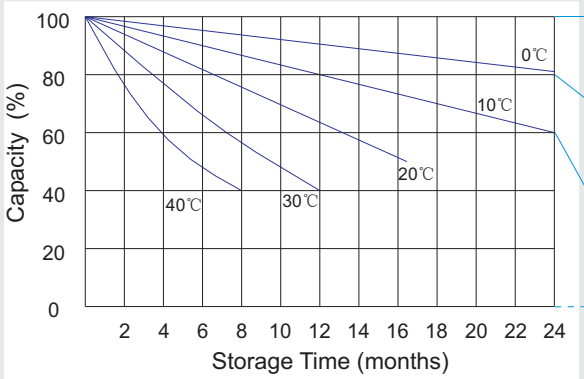
12V55Ah

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## Effect of temperature on long term float life




## Storage characteristic



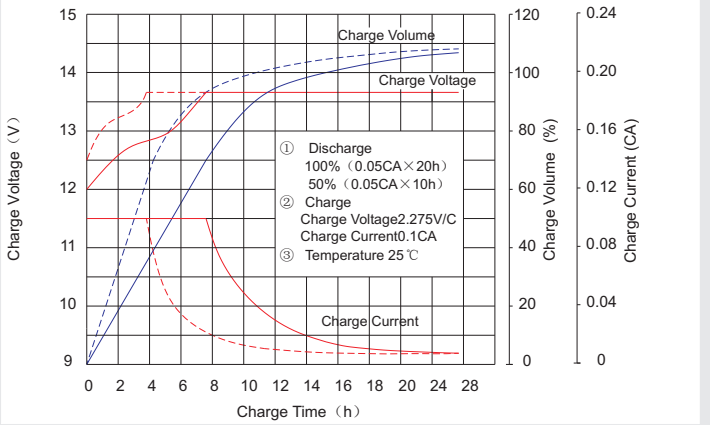

*Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)*

*Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.*

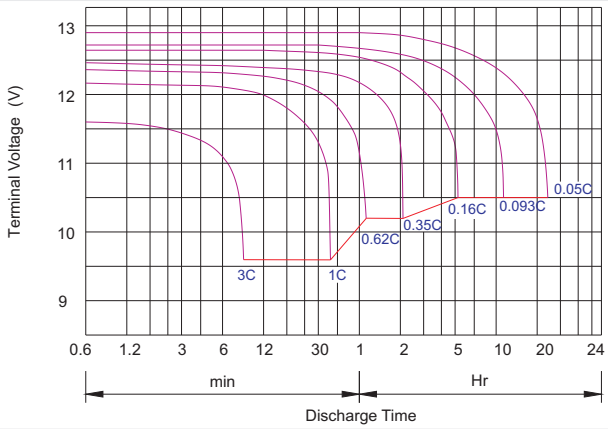
*Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached*

*Supplementary charge and storage guidelines*

## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
|---|---|---|---|
| Discharge Current (A) | （A）≤0.2C | 0.2C＜（A）＜1.0C | （A）≥1.0C |

**Charge the batteries at least once every six months, if they are stored at 25℃.**

Charging Method:

| | |
|---|---|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|---|---|---|---|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N-m | 8~10N-m | 10~12N-m |

## Maintenance & Cautions

**Float Service:**

※ Every month, recommend inspection every battery voltage.

※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.


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2015- Version 0



# RA12-65 (12V65Ah)

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## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 65Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 21.0 Kg(Tolerance±2%) |
| **Max. Discharge Current** | 650A (5 sec) |
| **Internal Resistance** | Approx. 6 mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current** | 19.5 A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F5/F11 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

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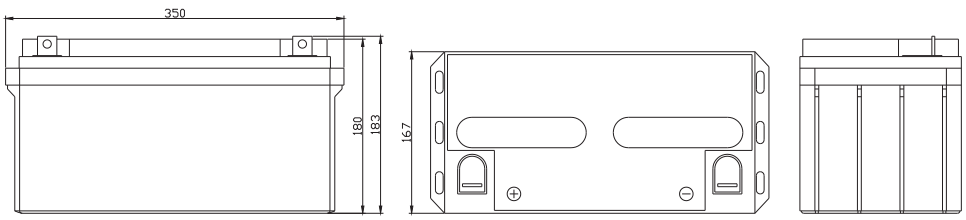
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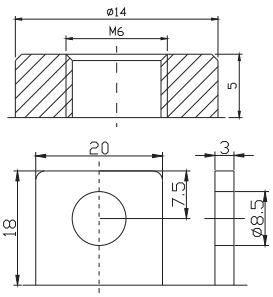
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IQNet CERTIFICATE Postcode:421001 is in conformity with OHSAS 18001:1999 Standard

## Dimensions

**Unit: mm** Dimension: 350(L)×167(W) ×183(H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 227.6 | 167.6 | 125.0 | 65.31 | 40.57 | 25.05 | 17.02 | 13.73 | 11.39 | 7.50 | 6.76 | 3.58 |
| 10.0V | 221.0 | 159.4 | 122.4 | 64.47 | 40.03 | 24.54 | 16.71 | 13.53 | 11.29 | 7.48 | 6.70 | 3.51 |
| 10.2V | 214.5 | 153.8 | 120.5 | 63.48 | 39.65 | 24.28 | 16.56 | 13.40 | 11.22 | 7.41 | 6.63 | 3.45 |
| 10.5V | 192.6 | 141.9 | 114.7 | 61.74 | 39.17 | 23.97 | 16.41 | 13.20 | 11.13 | 7.34 | 6.57 | 3.38 |
| 10.8V | 173.8 | 129.4 | 105.8 | 59.70 | 38.62 | 23.77 | 16.22 | 12.75 | 11.07 | 7.31 | 6.51 | 3.35 |
| 11.1V | 148.4 | 115.7 | 94.87 | 57.43 | 37.70 | 22.81 | 15.90 | 12.56 | 10.99 | 7.25 | 6.43 | 3.21 |

### *Constant Power Discharge Characteristics: W(25℃)*

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 2401 | 1785 | 1363 | 747.6 | 470.2 | 293.5 | 200.4 | 164.3 | 136.5 | 89.87 | 81.11 | 43.13 |
| 10.0V | 2354 | 1730 | 1341 | 739.8 | 465.9 | 290.0 | 197.4 | 162.0 | 135.3 | 89.52 | 80.47 | 42.38 |
| 10.2V | 2327 | 1684 | 1326 | 733.4 | 463.1 | 287.9 | 196.6 | 160.5 | 134.5 | 88.85 | 79.76 | 41.60 |
| 10.5V | 2118 | 1568 | 1265 | 718.4 | 460.1 | 284.2 | 195.0 | 158.3 | 133.4 | 88.10 | 78.97 | 40.82 |
| 10.8V | 1929 | 1446 | 1169 | 701.4 | 454.2 | 282.1 | 192.8 | 153.0 | 132.8 | 87.71 | 78.19 | 40.42 |
| 11.1V | 1695 | 1307 | 1052 | 682.2 | 447.4 | 271.6 | 189.5 | 150.8 | 132.3 | 87.09 | 77.34 | 38.98 |

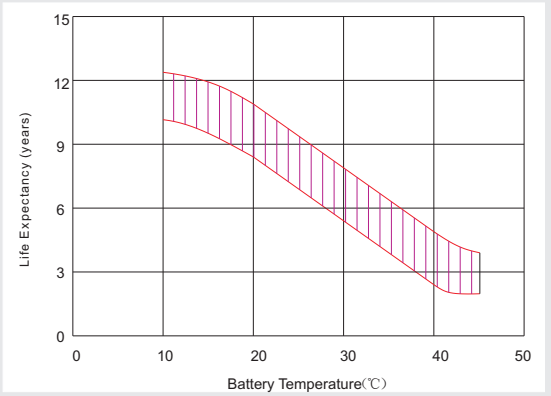
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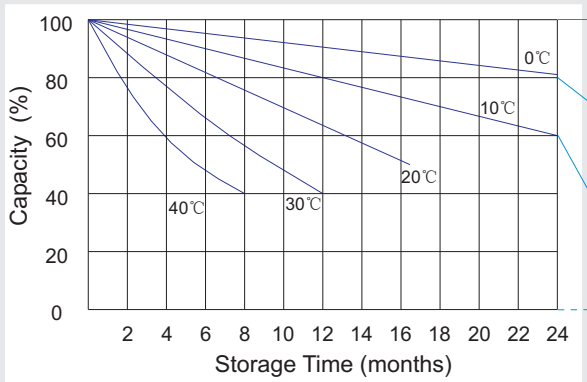
12V65Ah

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## Effect of temperature on long term float life




## Storage characteristic



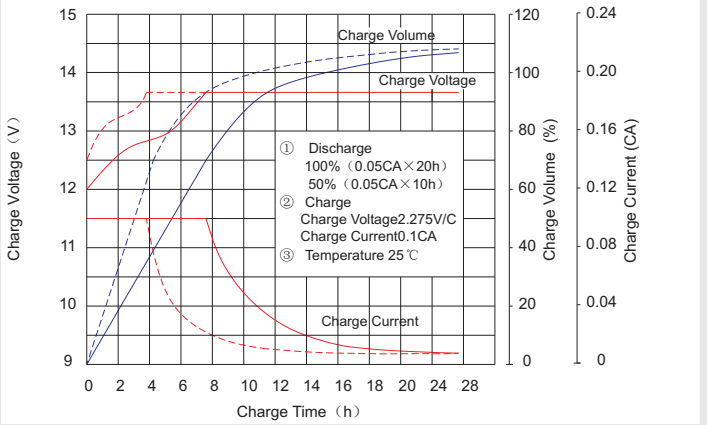

*Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)*

*Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.*

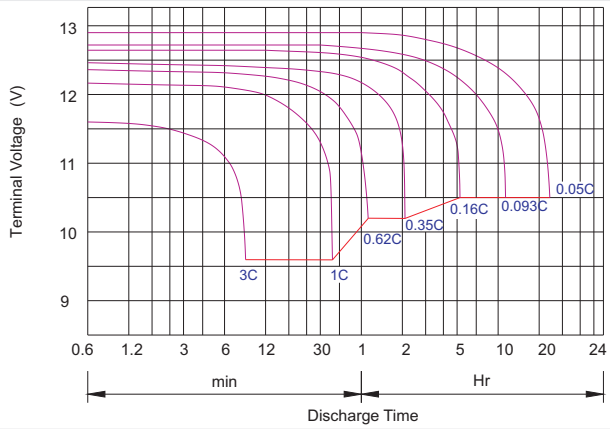
*Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached*

*Supplementary charge and storage guidelines*

## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
|---|---|---|---|
| Discharge Current (A) | （A）≤0.2C | 0.2C＜（A）＜1.0C | （A）≥1.0C |

**Charge the batteries at least once every six months, if they are stored at 25℃.**

Charging Method:

| | |
|---|---|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|---|---|---|---|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N-m | 8~10N-m | 10~12N-m |

## Maintenance & Cautions

**Float Service:**

※ Every month, recommend inspection every battery voltage.

※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.


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2015- Version 0



# RA12-80 (12V80Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

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## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 80Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 24.0 Kg (Tolerance±2%) |
| **Max. Discharge Current** | 800A (5 sec) |
| **Internal Resistance** | Approx. 5.5 mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current** | 24 A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid(VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F5/F11 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

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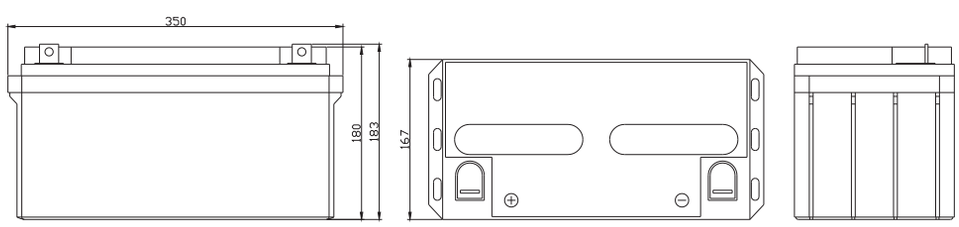
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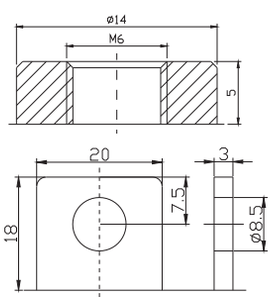
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OHSAS 18001:1999 Standard

## Dimensions

**Unit: mm** Dimension: 350(L)×167(W) ×183(H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 280.1 | 206.2 | 153.8 | 80.38 | 49.93 | 30.83 | 20.95 | 16.89 | 14.02 | 9.24 | 8.32 | 4.41 |
| 10.0V | 272.0 | 196.2 | 150.7 | 79.35 | 49.27 | 30.21 | 20.56 | 16.65 | 13.90 | 9.20 | 8.24 | 4.32 |
| 10.2V | 264.0 | 189.3 | 148.3 | 78.14 | 48.80 | 29.89 | 20.38 | 16.49 | 13.81 | 9.12 | 8.16 | 4.24 |
| 10.5V | 237.0 | 174.7 | 141.2 | 75.98 | 48.20 | 29.50 | 20.20 | 16.24 | 13.69 | 9.04 | 8.08 | 4.16 |
| 10.8V | 213.9 | 159.3 | 130.2 | 73.47 | 47.53 | 29.26 | 19.96 | 15.69 | 13.62 | 9.00 | 8.01 | 4.12 |
| 11.1V | 182.7 | 142.4 | 116.8 | 70.68 | 46.41 | 28.08 | 19.57 | 15.46 | 13.53 | 8.93 | 7.91 | 3.95 |

### *Constant Power Discharge Characteristics: W(25℃)*

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 2955 | 2196 | 1677 | 920.1 | 578.7 | 361.3 | 246.7 | 202.2 | 168.0 | 110.6 | 99.83 | 53.09 |
| 10.0V | 2897 | 2129 | 1650 | 910.5 | 573.4 | 356.9 | 243.0 | 199.4 | 166.5 | 110.2 | 99.04 | 52.17 |
| 10.2V | 2864 | 2073 | 1632 | 902.6 | 570.0 | 354.3 | 241.9 | 197.5 | 165.5 | 109.4 | 98.16 | 51.20 |
| 10.5V | 2607 | 1930 | 1556 | 884.2 | 566.3 | 349.8 | 240.0 | 194.8 | 164.2 | 108.4 | 97.20 | 50.23 |
| 10.8V | 2375 | 1779 | 1439 | 863.3 | 559.1 | 347.2 | 237.3 | 188.3 | 163.4 | 108.0 | 96.24 | 49.75 |
| 11.1V | 2086 | 1609 | 1295 | 839.6 | 550.7 | 334.2 | 233.3 | 185.6 | 162.8 | 107.2 | 95.19 | 47.97 |

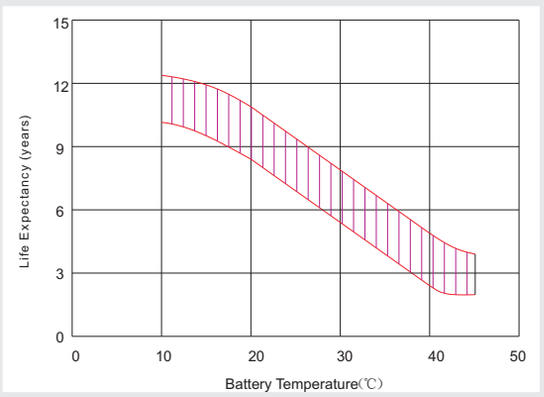
All mentioned values are average values (Tolerance ±2%).

# RA12-80

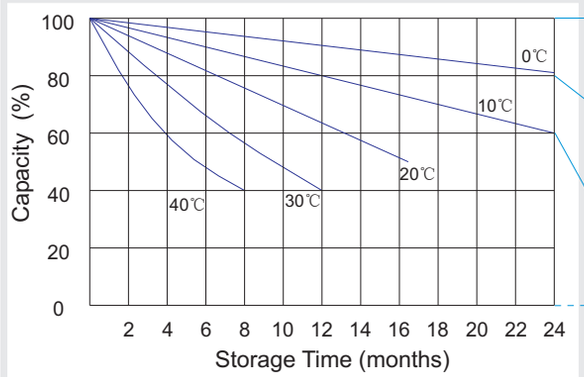
12V80Ah

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## Effect of temperature on long term float life




## Storage characteristic



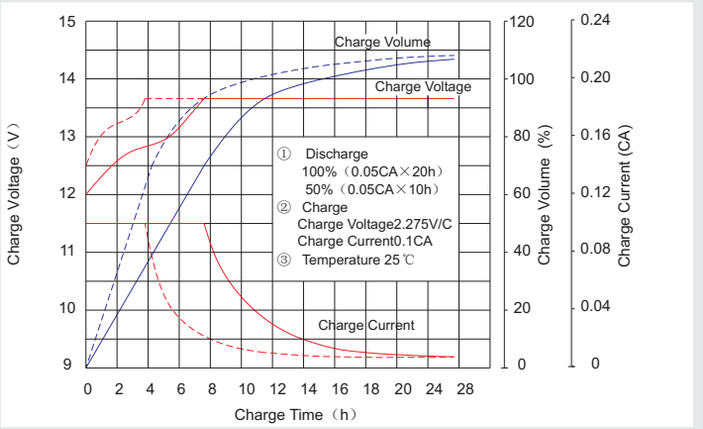

*Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)*

*Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.*

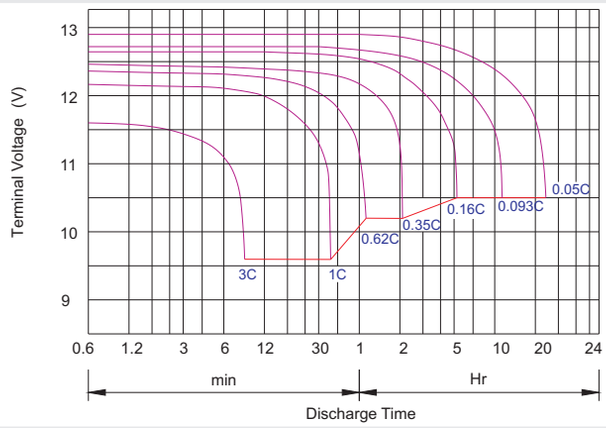
*Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached*

*Supplementary charge and storage guidelines*

## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
|---|---|---|---|
| Discharge Current (A) | （A）≤0.2C | 0.2C＜（A）＜1.0C | （A）≥1.0C |

**Charge the batteries at least once every six months, if they are stored at 25℃.**

Charging Method:

| | |
|---|---|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|---|---|---|---|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N-m | 8~10N-m | 10~12N-m |

### Maintenance & Cautions

**Float Service:**

※ Every month, recommend inspection every battery voltage.

※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.


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2015- Version 0



# RA12-100 (12V100Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

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## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 100Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx.30.0 Kg( Tolerance ±2%) |
| **Max. Discharge Current** | 1000A (5 sec) |
| **Internal Resistance** | Approx. 5mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current Limit** | 30 A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F5/F12 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

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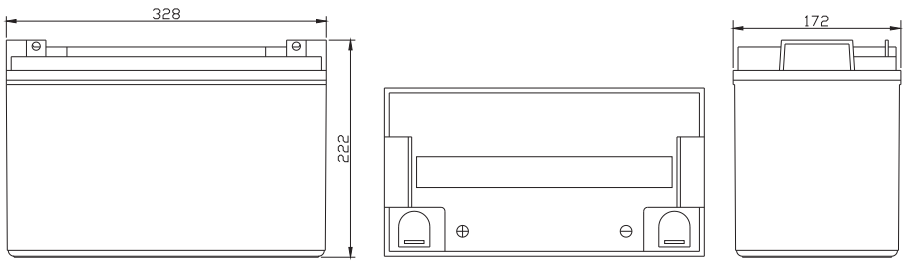
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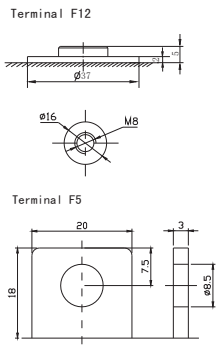
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## Dimensions

**Unit: mm** Dimension: 328(L) ×172(W) ×222 (H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 320.7 | 226.9 | 181.4 | 112.7 | 65.00 | 38.89 | 26.88 | 22.03 | 18.03 | 12.42 | 10.50 | 5.78 |
| 10.0V | 311.4 | 215.8 | 177.7 | 110.8 | 64.70 | 38.60 | 26.78 | 21.93 | 17.93 | 12.32 | 10.40 | 5.67 |
| 10.2V | 302.2 | 208.2 | 174.9 | 109.8 | 64.10 | 38.31 | 26.57 | 21.83 | 17.82 | 12.22 | 10.30 | 5.57 |
| 10.5V | 271.3 | 192.1 | 166.5 | 107.1 | 63.50 | 38.02 | 26.47 | 21.62 | 17.61 | 12.12 | 10.20 | 5.46 |
| 10.8V | 244.9 | 175.2 | 153.5 | 102.4 | 62.00 | 37.33 | 25.75 | 21.11 | 17.29 | 11.92 | 10.10 | 5.36 |
| 11.1V | 209.1 | 156.6 | 137.7 | 95.91 | 58.90 | 35.68 | 24.62 | 20.09 | 16.55 | 11.41 | 9.80 | 5.04 |

### *Constant Power Discharge Characteristics: W(25℃)*

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 3317 | 2416 | 1996 | 1284 | 751.1 | 458.4 | 319.9 | 262.6 | 215.1 | 148.3 | 125.5 | 69.26 |
| 10.0V | 3251 | 2342 | 1964 | 1269 | 749.3 | 456.0 | 320.0 | 262.3 | 214.6 | 147.6 | 124.7 | 68.06 |
| 10.2V | 3214 | 2280 | 1941 | 1260 | 743.5 | 453.3 | 318.6 | 261.7 | 213.9 | 146.6 | 123.6 | 66.80 |
| 10.5V | 2926 | 2123 | 1852 | 1230 | 736.8 | 450.0 | 317.4 | 259.3 | 211.3 | 145.4 | 122.4 | 65.54 |
| 10.8V | 2665 | 1957 | 1712 | 1179 | 723.2 | 444.2 | 308.7 | 253.4 | 207.5 | 143.0 | 121.2 | 64.28 |
| 11.1V | 2341 | 1770 | 1541 | 1108 | 692.3 | 427.7 | 295.4 | 241.1 | 198.6 | 136.9 | 117.6 | 60.50 |

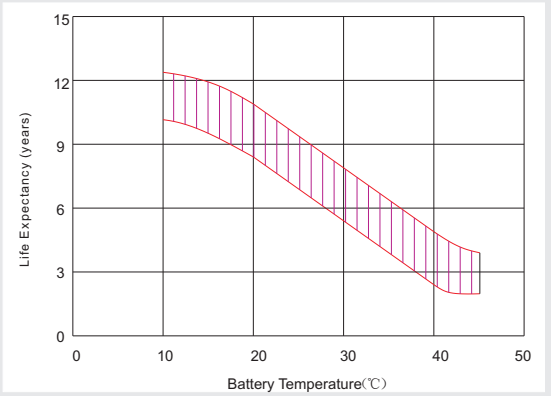
All mentioned values are average values (Tolerance ±2%).

# RA12-100

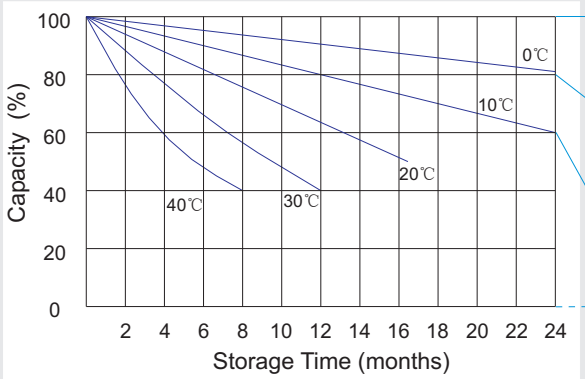
12V100Ah

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## Effect of temperature on long term float life




## Storage characteristic



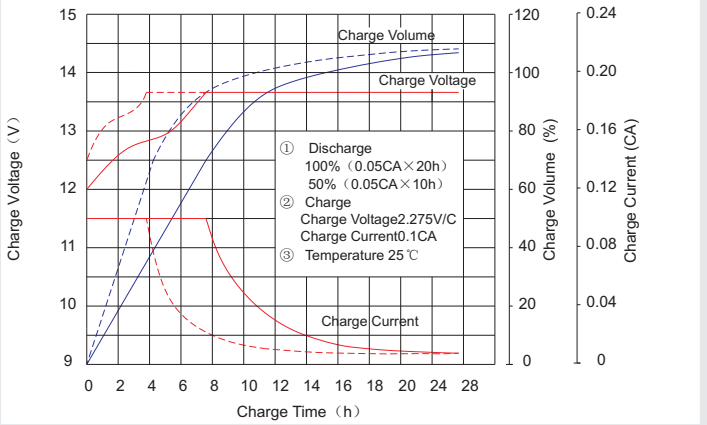

*Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)*

*Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.*

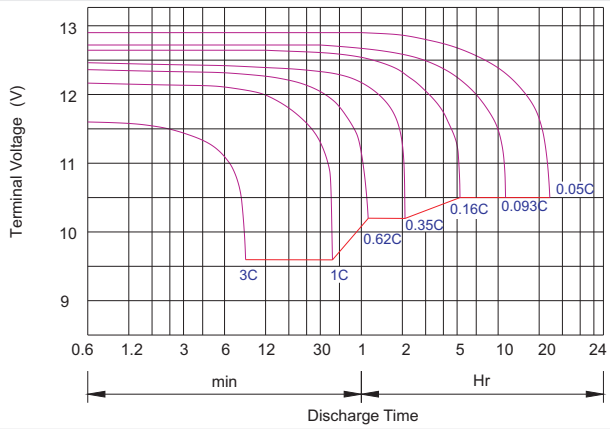
*Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached*

*Supplementary charge and storage guidelines*

## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
|---|---|---|---|
| Discharge Current (A) | （A）≤0.2C | 0.2C＜（A）＜1.0C | （A）≥1.0C |

**Charge the batteries at least once every six months, if they are stored at 25℃.**

Charging Method:

| | |
|---|---|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|---|---|---|---|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N-m | 8~10N-m | 10~12N-m |

## Maintenance & Cautions

**Float Service:**

※ Every month, recommend inspection every battery voltage.

※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.


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2015- Version 0



# RA12-200 (12V200Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

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## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 200Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 60.0 Kg (Tolerance±1.5%) |
| **Max. Discharge Current** | 2000A (5 sec) |
| **Internal Resistance** | Approx. 4 mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current** | 60 A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F10/F16 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

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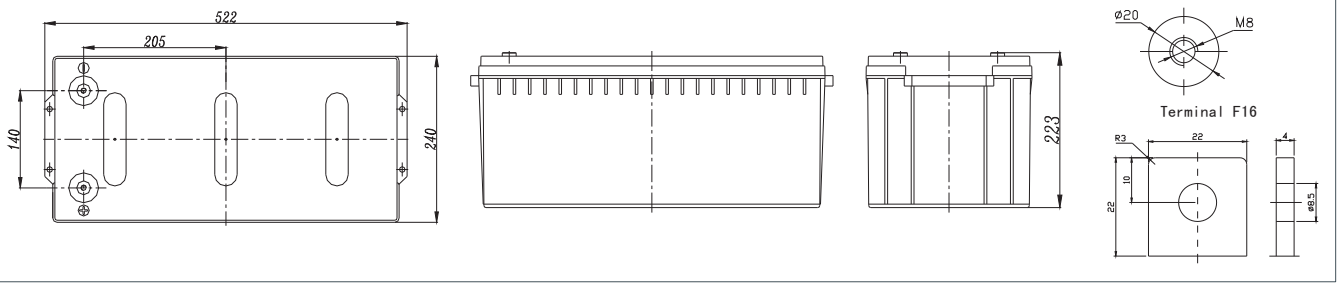
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IQNet CERTIFICATE Postcode:421001 is in conformity with OHSAS 18001:1999 Standard

## Dimensions

**Unit: mm** Dimension: 522(L) ×240(W) ×223(H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 569.6 | 426.7 | 344.7 | 200.9 | 124.8 | 77.07 | 52.38 | 42.23 | 35.06 | 23.09 | 20.81 | 11.02 |
| 10.0V | 553.2 | 406.0 | 337.6 | 198.4 | 123.2 | 75.52 | 51.41 | 41.63 | 34.75 | 23.00 | 20.61 | 10.81 |
| 10.2V | 536.8 | 391.7 | 332.3 | 195.3 | 122.0 | 74.72 | 50.95 | 41.22 | 34.52 | 22.79 | 20.40 | 10.61 |
| 10.5V | 482.0 | 361.4 | 316.4 | 190.0 | 120.5 | 73.74 | 50.50 | 40.61 | 34.23 | 22.59 | 20.20 | 10.40 |
| 10.8V | 435.1 | 329.6 | 291.7 | 183.7 | 118.8 | 73.14 | 49.91 | 39.22 | 34.06 | 22.50 | 20.02 | 10.30 |
| 11.1V | 371.5 | 294.6 | 261.6 | 176.7 | 116.0 | 70.20 | 48.93 | 38.65 | 33.81 | 22.32 | 19.78 | 9.88 |

### *Constant Power Discharge Characteristics: W(25℃)*

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 5892 | 4544 | 3792 | 2300 | 1447 | 903.2 | 616.7 | 505.5 | 420.0 | 276.5 | 249.6 | 132.7 |
| 10.0V | 5776 | 4405 | 3731 | 2276 | 1433 | 892.2 | 607.5 | 498.4 | 416.2 | 275.5 | 247.6 | 130.4 |
| 10.2V | 5710 | 4289 | 3689 | 2257 | 1425 | 885.8 | 604.8 | 493.7 | 413.7 | 273.4 | 245.4 | 128.0 |
| 10.5V | 5198 | 3994 | 3518 | 2211 | 1416 | 874.6 | 599.9 | 487.1 | 410.4 | 271.1 | 243.0 | 125.6 |
| 10.8V | 4734 | 3681 | 3252 | 2158 | 1398 | 868.1 | 593.2 | 470.6 | 408.5 | 269.9 | 240.6 | 124.4 |
| 11.1V | 4159 | 3328 | 2927 | 2099 | 1377 | 835.6 | 583.2 | 463.9 | 407.0 | 268.0 | 238.0 | 119.9 |

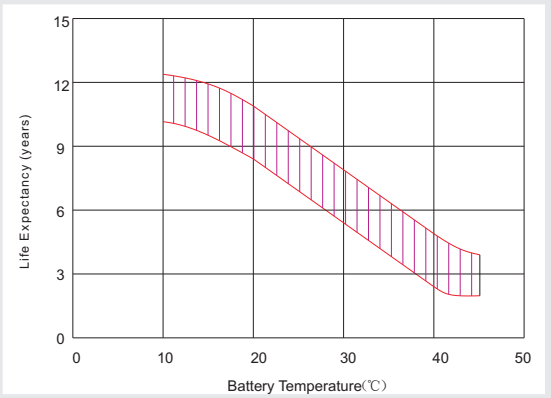
All mentioned values are average values (Tolerance ±2%).

# RA12-200

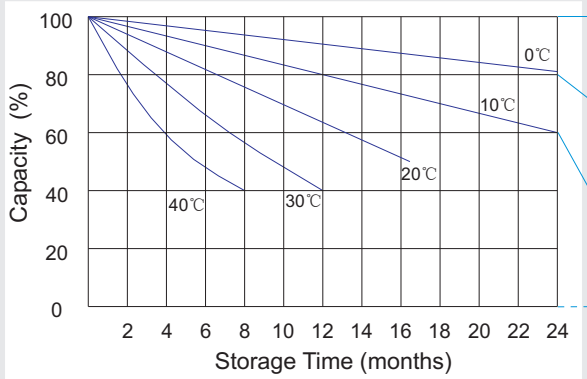
12V200Ah

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## Effect of temperature on long term float life




## Storage characteristic



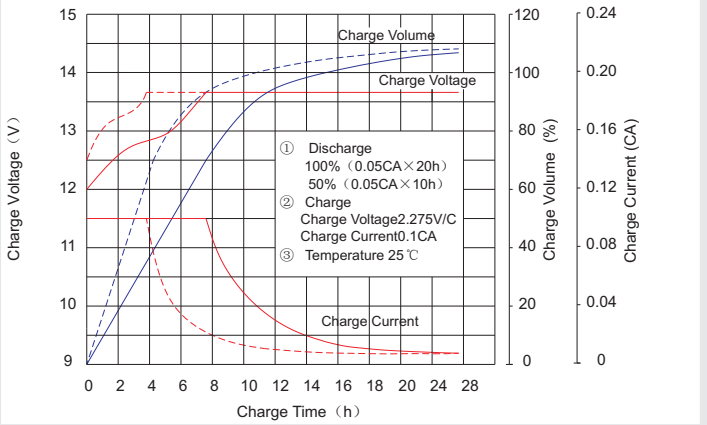

*Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)*

*Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.*

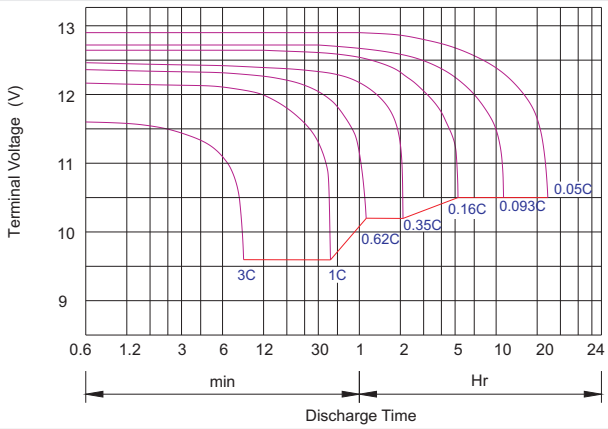
*Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached*

*Supplementary charge and storage guidelines*

## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
|---|---|---|---|
| Discharge Current (A) | （A）≤0.2C | 0.2C＜（A）＜1.0C | （A）≥1.0C |

**Charge the batteries at least once every six months, if they are stored at 25℃.**

Charging Method:

| | |
|---|---|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| Bolt | M5 | M6 | M8 |
|---|---|---|---|
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6~7N-m | 8~10N-m | 10~12N-m |

## Maintenance & Cautions

**Float Service:**

※ Every month, recommend inspection every battery voltage.

※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.


**SHENZHEN RITAR POWER CO.,LTD.**

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Tel:+86-755-33981668 Fax:86-755-8347-5180


2015- Version 0



# RA12-150 (12V150Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

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## Specification

| | |
|---|---|
| **Cells Per Unit** | 6 |
| **Voltage Per Unit** | 12 |
| **Capacity** | 150Ah@10hr-rate to 1.80V per cell @25℃ |
| **Weight** | Approx. 44.5 Kg (Tolerance±1.5%) |
| **Max. Discharge Current** | 1500A (5 sec) |
| **Internal Resistance** | Approx. 4 mΩ |
| **Operating Temperature Range** | Discharge: -20℃~60℃<br>Charge: 0℃~50℃<br>Storage: -20℃~60℃ |
| **Normal Operating Temperature Range** | 25℃±5℃ |
| **Float charging Voltage** | 13.6 to 13.8 VDC/unit Average at 25℃ |
| **Recommended Maximum Charging Current** | 45A |
| **Equalization and Cycle Service** | 14.6 to 14.8 VDC/unit Average at 25℃ |
| **Self Discharge** | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using. |
| **Terminal** | Terminal F5/F12 |
| **Container Material** | A.B.S. UL94-HB, UL94-V0 Optional. |

MH28539

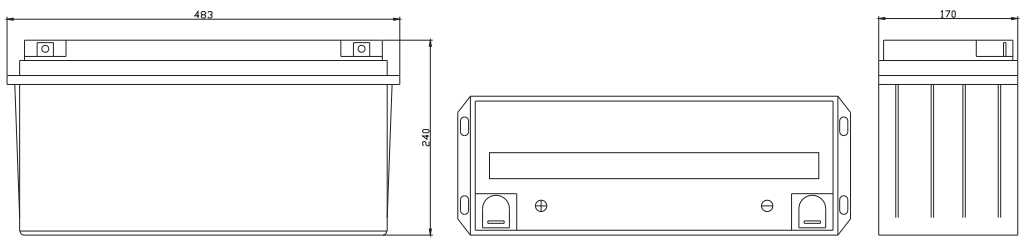
G4M20206-0910-E-16

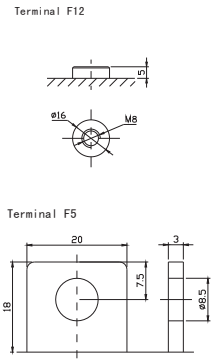
IQNet CERTIFICATE Postcode:421001 is in conformity with ISO 14001:2004 Standard

IQNet CERTIFICATE Postcode:421001 is in conformity with OHSAS 18001:1999 Standard

## Dimensions

**Unit: mm** Dimension: 483(L)×170(W) ×240(H)




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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 452.4 | 337.8 | 272.1 | 150.7 | 93.63 | 57.81 | 39.28 | 31.68 | 26.29 | 17.32 | 15.61 | 8.26 |
| 10.0V | 439.3 | 321.4 | 266.5 | 148.8 | 92.38 | 56.64 | 38.56 | 31.23 | 26.06 | 17.25 | 15.46 | 8.11 |
| 10.2V | 426.3 | 310.1 | 262.4 | 146.5 | 91.50 | 56.04 | 38.21 | 30.91 | 25.89 | 17.10 | 15.30 | 7.95 |
| 10.5V | 382.8 | 286.1 | 249.8 | 142.5 | 90.38 | 55.31 | 37.87 | 30.46 | 25.67 | 16.94 | 15.15 | 7.80 |
| 10.8V | 345.5 | 260.9 | 230.3 | 137.8 | 89.12 | 54.85 | 37.43 | 29.41 | 25.55 | 16.87 | 15.01 | 7.72 |
| 11.1V | 295.0 | 233.2 | 206.5 | 132.5 | 87.01 | 52.65 | 36.70 | 28.99 | 25.36 | 16.74 | 14.84 | 7.41 |

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

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.60V | 4679 | 3598 | 2993 | 1725 | 1085 | 677.4 | 462.5 | 379.1 | 315.0 | 207.4 | 187.2 | 99.54 |
| 10.0V | 4587 | 3487 | 2945 | 1707 | 1075 | 669.1 | 455.6 | 373.8 | 312.2 | 206.6 | 185.7 | 97.81 |
| 10.2V | 4534 | 3395 | 2912 | 1692 | 1069 | 664.4 | 453.6 | 370.3 | 310.3 | 205.0 | 184.1 | 96.00 |
| 10.5V | 4128 | 3162 | 2778 | 1658 | 1062 | 656.0 | 449.9 | 365.3 | 307.8 | 203.3 | 182.2 | 94.19 |
| 10.8V | 3760 | 2914 | 2567 | 1619 | 1048 | 651.1 | 444.9 | 353.0 | 306.4 | 202.4 | 180.4 | 93.28 |
| 11.1V | 3302 | 2635 | 2311 | 1574 | 1033 | 626.7 | 437.4 | 347.9 | 305.3 | 201.0 | 178.5 | 89.94 |

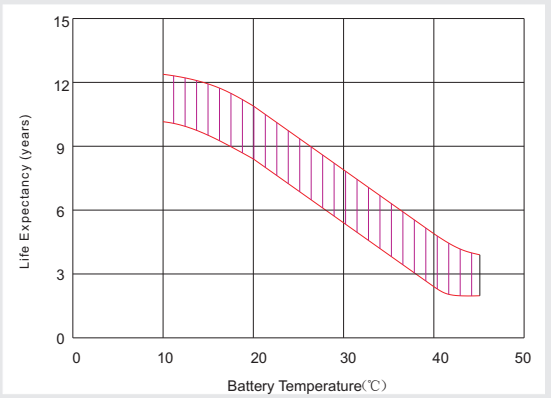
All mentioned values are average values (Tolerance ±2%).

# RA12-150

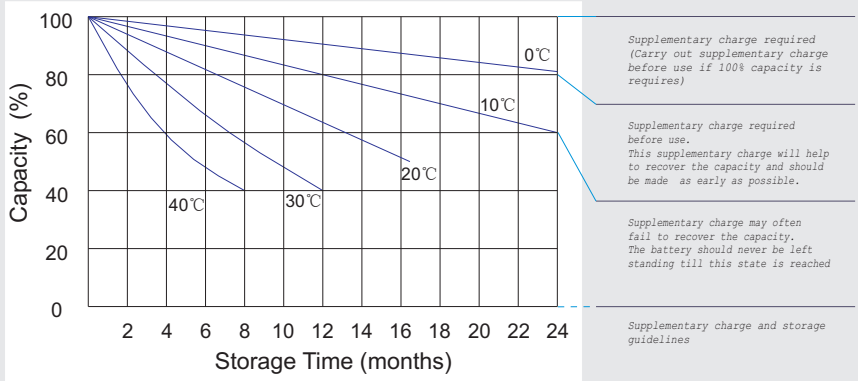
12V150Ah

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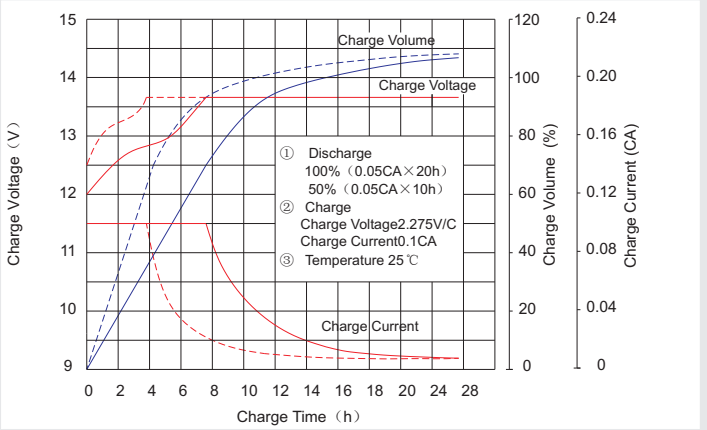
## Effect of temperature on long term float life



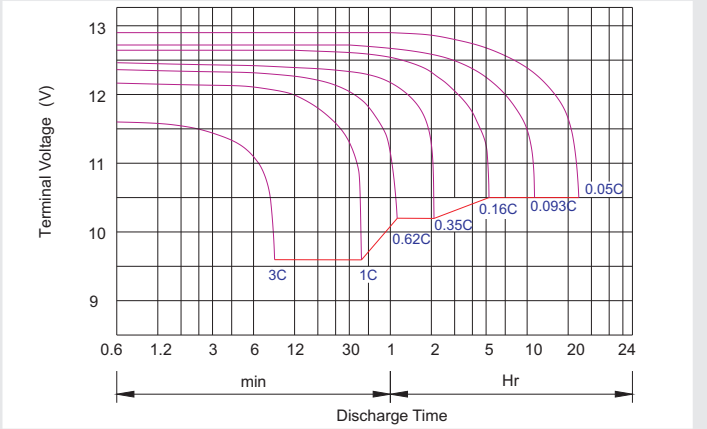

## Storage characteristic




## Charge characteristic Curve for standby use




## Discharge characteristic Curve




## Capacity Factors With Different Temperature

| Battery Type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
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Charging Method:

| | |
|---|---|
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| Constant Current | -0.2Cx2h+0.1Cx12h |
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|---|---|---|---|
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