

# DC12-55(12V55Ah)



## Specification

|                                    |                                                                                                                                                                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cells Per Unit                     | 6                                                                                                                                                                                                                          |
| Voltage Per Unit                   | 12V                                                                                                                                                                                                                        |
| Capacity                           | 55Ah@20hr-rate to 1.75V per cell @25°C                                                                                                                                                                                     |
| Weight                             | Approx. 16.5Kg (Tolerance ±5%)                                                                                                                                                                                             |
| Internal Resistance                | ≤7.5 mΩ (Full Charge Condition @25°C)                                                                                                                                                                                      |
| Terminal                           | Default F11(M6), F15 (M8) & L3 Optional                                                                                                                                                                                    |
| Max. Discharge Current             | 550A (5 sec)                                                                                                                                                                                                               |
| Design Life                        | 12 years                                                                                                                                                                                                                   |
| Max. Charging Current              | 16.5 A                                                                                                                                                                                                                     |
| Reference Capacity                 | C <sub>3</sub> 41.3Ah<br>C <sub>5</sub> 46.8Ah<br>C <sub>10</sub> 52.4Ah<br>C <sub>20</sub> 55.0Ah                                                                                                                         |
| Float Charging Voltage             | 13.6 V~13.8 V @ 25°C<br>Temperature Compensation: -3mV/°C/Cell                                                                                                                                                             |
| Cycle Use Voltage                  | 14.6 V~14.8 V @ 25°C<br>Temperature Compensation: -4mV/°C/Cell                                                                                                                                                             |
| Operating Temperature Range        | Discharge: -20°C~60°C<br>Charge: 0°C~50°C<br>Storage: -20°C~60°C                                                                                                                                                           |
| Normal Operating Temperature Range | 25°C ±5°C                                                                                                                                                                                                                  |
| Self Discharge                     | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charged batteries before using. |
| Container Material                 | A.B.S. UL94-HB, UL94-V0 Optional.                                                                                                                                                                                          |



DC (Deep Cycle) series AGM batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharging. By using strong grids, thick plate and specially active material are designed for repeated deep-discharge applications. The DC series AGM batteries offer 30% more cyclic life than the standby series. It is suitable for solar and wind renewable energy storage, mobility and medical equipment and cable TV etc.



ISO 9001



ISO 14001



ISO 45001

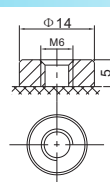
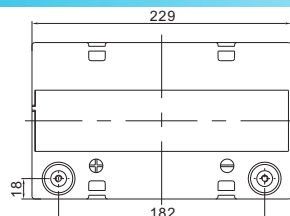
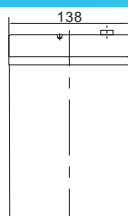
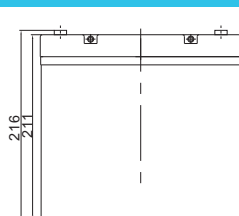


MH 28539



BSTXD210316008501EC

## Dimensions



F11 TERMINAL

|              |                       |
|--------------|-----------------------|
| Length       | 229±2mm (9.02 inches) |
| Width        | 138±2mm (5.43 inches) |
| Height       | 211±2mm (8.31 inches) |
| Total Height | 216±2mm (8.50 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°C)

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 8HR   | 10HR  | 20HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 133.5 | 101.5 | 59.90 | 33.40 | 19.89 | 15.50 | 12.16 | 10.34 | 6.632 | 5.500 | 2.850 |
| 1.65V    | 123.0 | 94.93 | 56.74 | 32.27 | 19.23 | 15.02 | 11.79 | 10.01 | 6.579 | 5.448 | 2.835 |
| 1.70V    | 114.0 | 89.27 | 53.80 | 31.23 | 18.71 | 14.38 | 11.43 | 9.744 | 6.475 | 5.343 | 2.800 |
| 1.75V    | 104.6 | 83.62 | 51.67 | 30.25 | 18.00 | 14.01 | 11.12 | 9.473 | 6.371 | 5.290 | 2.750 |
| 1.80V    | 95.19 | 76.57 | 49.77 | 28.91 | 17.38 | 13.75 | 10.86 | 9.350 | 6.266 | 5.238 | 2.723 |
| 1.85V    | 74.48 | 63.36 | 42.20 | 25.80 | 15.89 | 12.80 | 10.18 | 8.607 | 5.901 | 4.924 | 2.698 |

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

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 8HR   | 10HR  | 20HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 227.4 | 177.1 | 108.8 | 62.71 | 37.61 | 29.42 | 23.43 | 19.57 | 12.92 | 10.79 | 5.691 |
| 1.65V    | 219.0 | 172.2 | 106.3 | 61.64 | 36.60 | 28.69 | 22.86 | 19.04 | 12.82 | 10.68 | 5.640 |
| 1.70V    | 204.4 | 163.0 | 101.2 | 59.83 | 35.68 | 27.59 | 22.13 | 18.57 | 12.67 | 10.48 | 5.589 |
| 1.75V    | 190.2 | 153.8 | 97.63 | 58.17 | 34.41 | 26.91 | 21.61 | 18.14 | 12.46 | 10.37 | 5.487 |
| 1.80V    | 175.2 | 142.2 | 94.47 | 55.79 | 33.63 | 26.76 | 21.19 | 17.90 | 12.25 | 10.27 | 5.437 |
| 1.85V    | 139.0 | 119.5 | 81.02 | 50.11 | 30.97 | 24.96 | 19.95 | 16.56 | 11.58 | 9.697 | 5.386 |

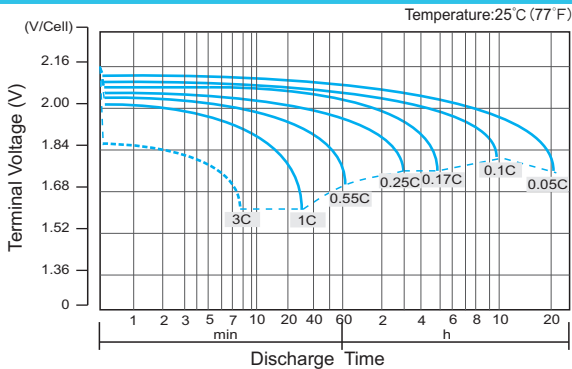
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

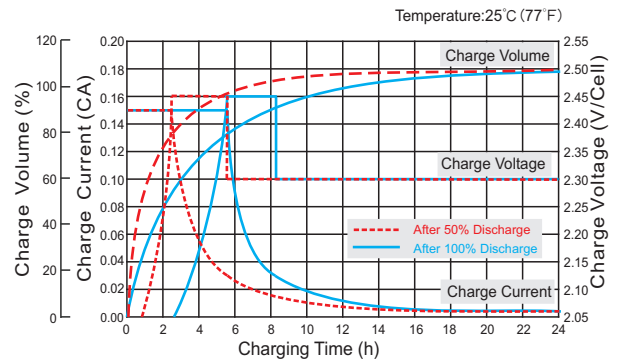
# DC12-55(12V55Ah)



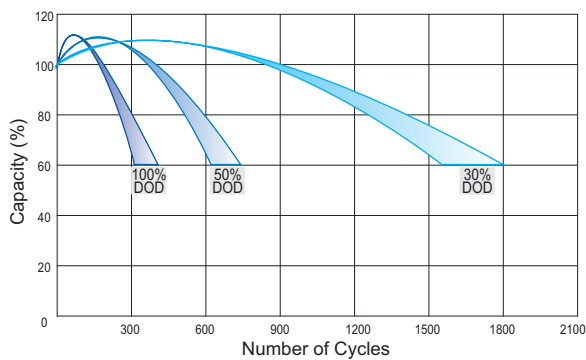
**Discharge Characteristics Curve**



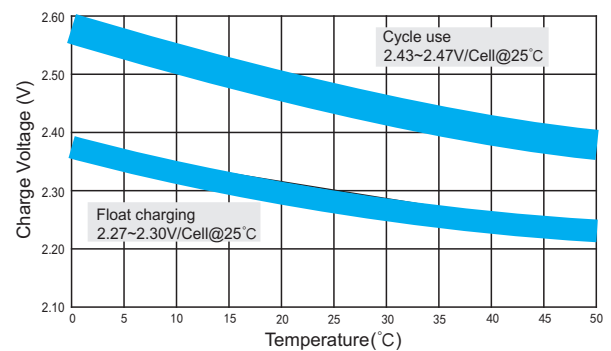
**Charge Characteristic Curve for Cycle Use(IUU)**



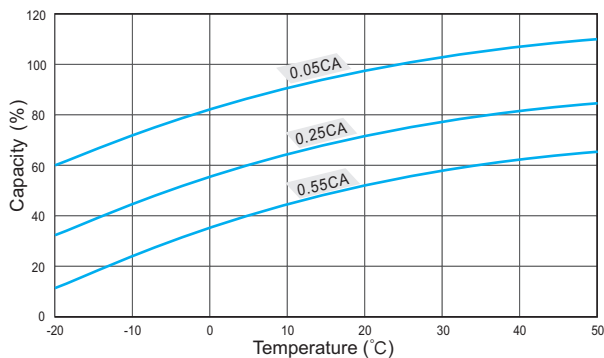
**Cycle Life in Relation to Depth of Discharge**



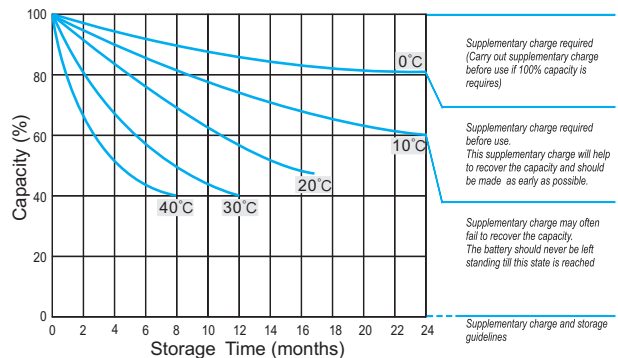
**Relationship Between Charging Voltage and Temperature**



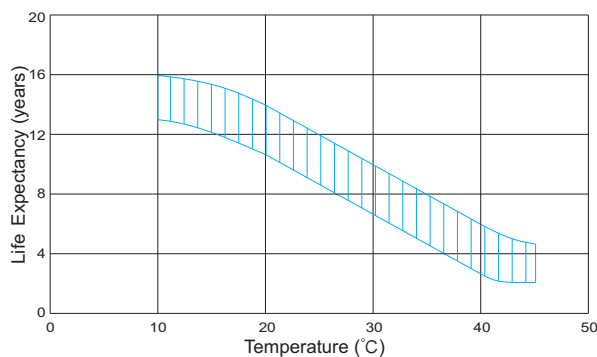
**Temperature Effects on Capacity**



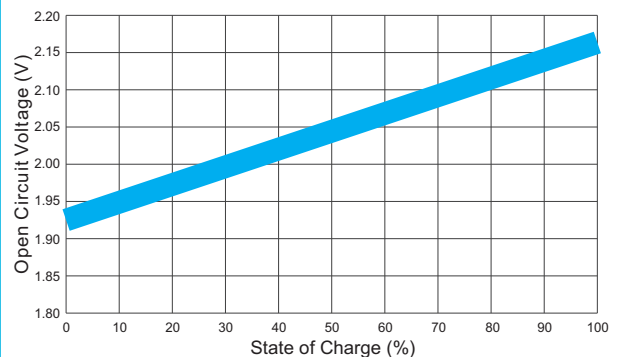
**Storage Characteristics**



**Effect of Temperature on Long Term Life**



**Relationship of OCV And State of Charge(20°C)**



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