



# DC2-350A (2V350Ah)

DC (Deep Cycle) series is specially designed for frequent cyclic discharge. By using strong grids and specially designed active material, the DC series battery offers 30% more cyclic life than the standby series. It is suitable for solar energy systems, marine and RV etc.

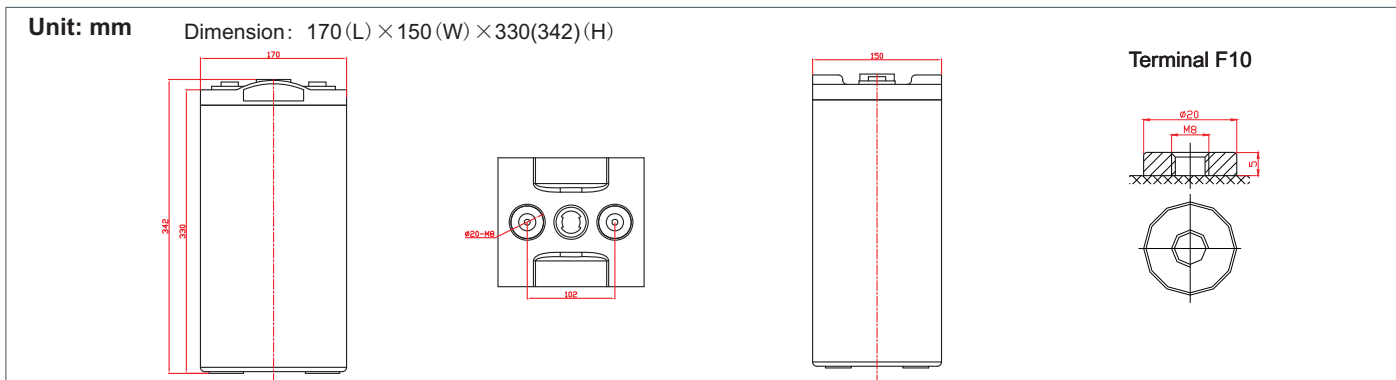


## Specification

|                                      |   |
|--------------------------------------|---|
| Cells Per Unit                       | 1   |
| Voltage Per Unit                     | 2   |
| Capacity                             | 350Ah@10hr-rate to 1.80V per cell @25°C   |
| Weight                               | Approx. 21.5 Kg (Tolerance ±2%)   |
| Max. Discharge Current               | 1750 A (5 sec)  |
| Internal Resistance                  | Approx. 0.7 mΩ  |
| 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  |
| Float charging Voltage               | 2.27 to 2.3 VDC/unit Average at 25°C  |
| Recommended Maximum Charging Current | 70 A  |
| Equalization and Cycle Service       | 2.43 to 2.47 VDC/unit Average at 25°C   |
| Self Discharge                       | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using. |
| Terminal                             | Thread insert & Bolt (F10)  |
| Container Material                   | A.B.S. UL94-HB, UL94-V0 Optional.   |



## Dimensions



### Constant Current Discharge Characteristics : A(25°C)

| F.V/Time | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 6HR   | 8HR   | 10HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 475.2 | 350.5 | 218.5 | 134.1 | 99.85 | 71.64 | 62.70 | 56.30 | 45.45 | 36.45 |
| 1.65V    | 451.9 | 336.5 | 215.8 | 129.2 | 95.66 | 69.13 | 62.07 | 54.94 | 43.41 | 36.11 |
| 1.70V    | 421.3 | 317.2 | 211.6 | 127.1 | 93.57 | 68.50 | 61.19 | 53.59 | 42.73 | 35.76 |
| 1.75V    | 374.1 | 285.5 | 194.8 | 120.1 | 88.68 | 64.73 | 60.40 | 50.87 | 41.38 | 35.38 |
| 1.80V    | 322.0 | 260.0 | 183.6 | 114.5 | 85.19 | 64.10 | 59.35 | 50.19 | 40.70 | 35.05 |
| 1.85V    | 272.3 | 234.1 | 169.7 | 108.2 | 81.00 | 59.07 | 55.86 | 47.48 | 38.66 | 32.91 |

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

| F.V/Time | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 6HR   | 8HR   | 10HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 831.9 | 638.7 | 406.7 | 250.8 | 186.1 | 134.6 | 124.7 | 108.6 | 86.48 | 72.64 |
| 1.65V    | 810.1 | 635.3 | 404.5 | 247.2 | 182.4 | 132.6 | 123.5 | 107.2 | 85.75 | 71.95 |
| 1.70V    | 765.3 | 601.2 | 400.5 | 243.6 | 179.6 | 132.1 | 122.0 | 104.7 | 84.43 | 71.51 |
| 1.75V    | 681.7 | 541.8 | 375.7 | 230.6 | 173.2 | 125.5 | 120.3 | 99.59 | 81.77 | 70.79 |
| 1.80V    | 590.0 | 494.3 | 357.3 | 220.2 | 166.0 | 124.9 | 118.2 | 98.41 | 80.45 | 70.21 |
| 1.85V    | 503.2 | 445.7 | 331.4 | 208.5 | 158.2 | 115.7 | 111.6 | 93.22 | 76.45 | 66.15 |

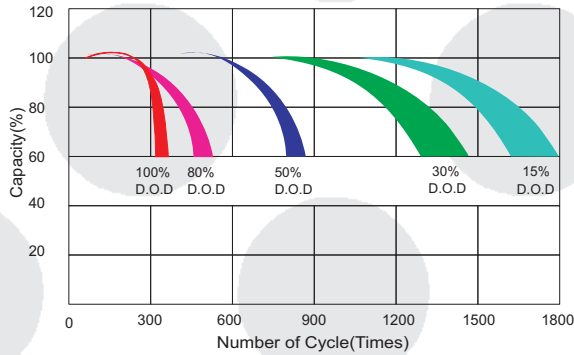
All mentioned values are average values (Tolerance ±2%).

# DC2-350A

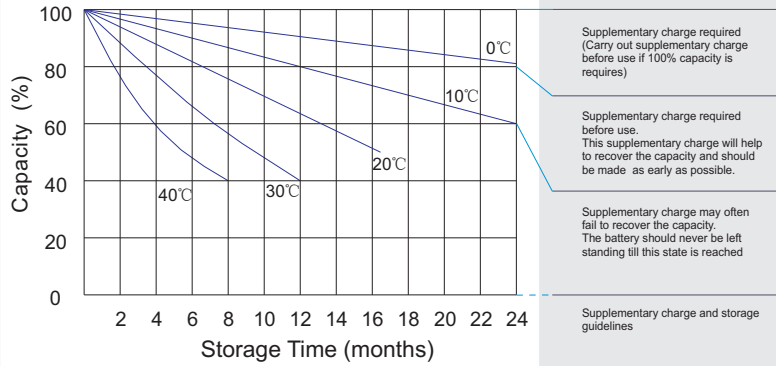
2V350Ah



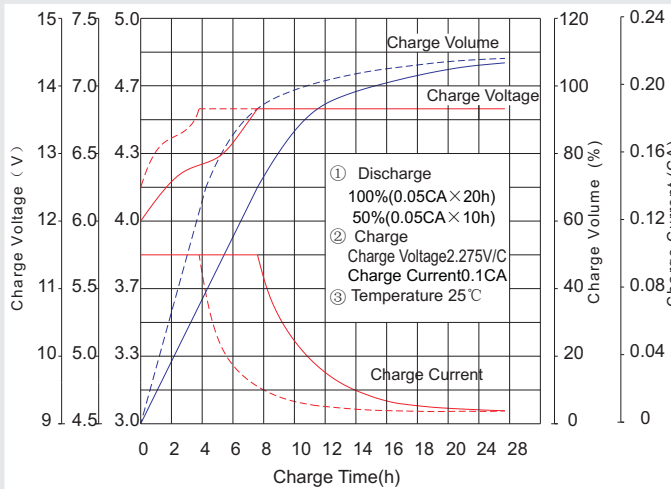
## Life characteristics of cyclic use



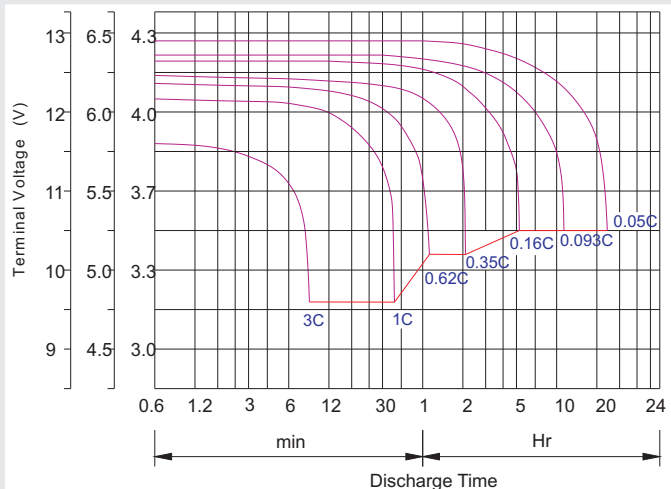
## Storage characteristic



## Charge characteristic Curve for standby use



## Discharge characteristic curve



## Capacity Factors With Different Temperature

| Battery Type |        | -20°C | -10°C | 0°C | 5°C | 10°C | 20°C | 25°C | 30°C | 40°C | 45°C |
|--------------|--------|-------|-------|-----|-----|------|------|------|------|------|------|
| 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°C.

Charging Method:

|                  |  |
|------------------|--|
| Constant Voltage | -0.2Cx2h+2.4-2.45V/cellx24h, Max. Current 0.2C |
| Constant Current | -0.2Cx2h+0.1Cx12h                              |
| Fast             | -0.2Cx2h+0.2Cx6h                               |

|          |                       |                  |                       |
|----------|-----------------------|------------------|-----------------------|
| 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

### Cycle service

- ※ Avoid battery over discharge, especially battery series connection use.
- ※ Charged with recommend voltage, ensure battery can be full recharged.
- In general, recharge capacity should be 1.1-1.15 times discharge capacity.
- ※ Effect of temperature on float charge voltage: -4mV/°C/Cell.
- ※ There are a number of factors that will affect the length of cyclic service.
- The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.
- Generally speaking, the most important factors is depth of discharge.