



DC 2-100 (2V100Ah)

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.

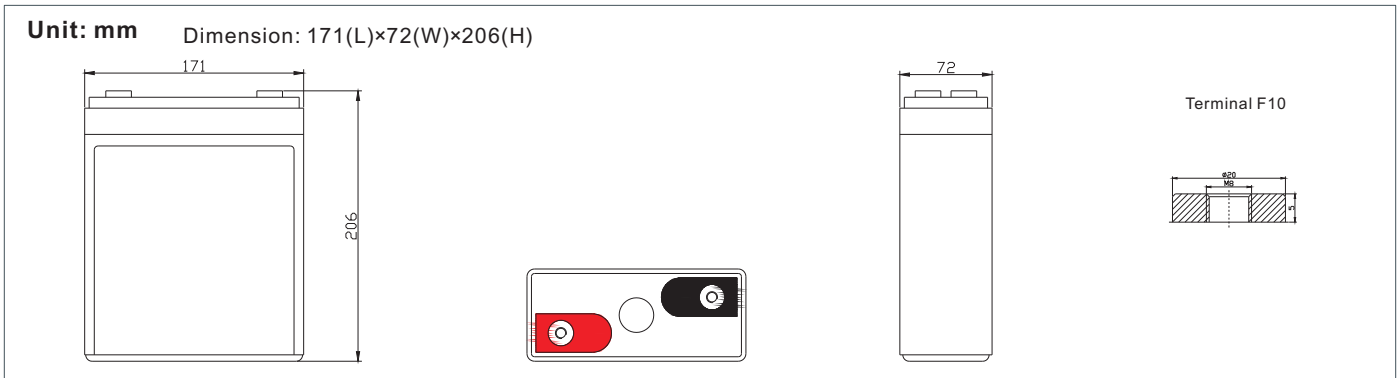


Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	100Ah@10hr-rate to 1.75V per cell @25°C
Weight	Approx. 5.6 Kg(Tolerance±3%)
Max. Discharge Current	500 A (5 sec)
Internal Resistance	Approx. 1 mΩ
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C 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 Limit	20 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	135.8	100.1	62.44	38.30	28.53	20.47	17.92	16.09	12.98	10.42
1.65V	129.1	96.14	61.65	36.91	27.33	19.75	17.74	15.70	12.40	10.32
1.70V	120.4	90.63	60.45	36.31	26.73	19.57	17.48	15.31	12.21	10.22
1.75V	106.9	81.56	55.66	34.31	25.34	18.49	17.26	14.54	11.82	10.11
1.80V	92.0	74.29	52.47	32.72	24.34	18.31	16.96	14.34	11.63	10.01
1.85V	77.8	66.88	48.48	30.92	23.14	16.88	15.96	13.57	11.05	9.40

Constant Power Discharge Characteristics : W(25°C)

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	237.7	182.5	116.2	71.67	53.17	38.46	35.62	31.04	24.71	20.75
1.65V	231.5	181.5	115.6	70.63	52.12	37.89	35.29	30.64	24.50	20.56
1.70V	218.7	171.8	114.4	69.60	51.33	37.74	34.87	29.93	24.12	20.43
1.75V	194.8	154.8	107.3	65.88	49.49	35.85	34.38	28.45	23.36	20.23
1.80V	168.6	141.2	102.07	62.92	47.44	35.69	33.78	28.12	22.99	20.06
1.85V	143.8	127.3	94.68	59.56	45.19	33.06	31.87	26.64	21.84	18.90

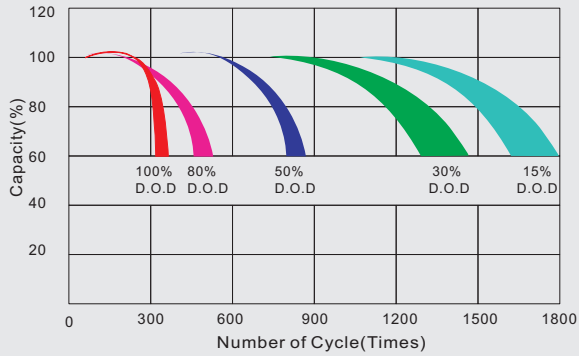
All mentioned values are average values(Tolerance±2%).

DC2-100

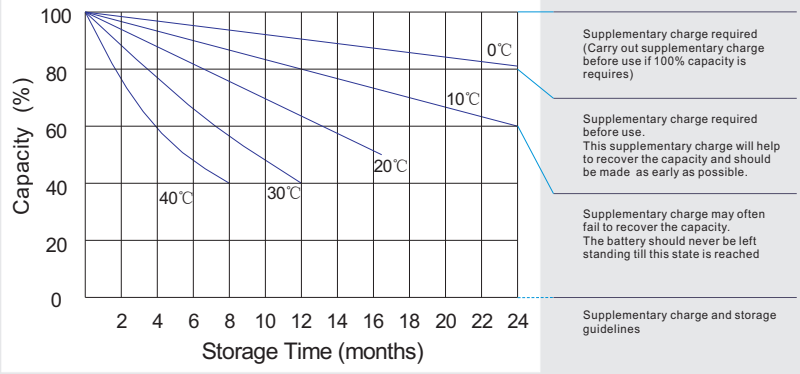
2V100Ah



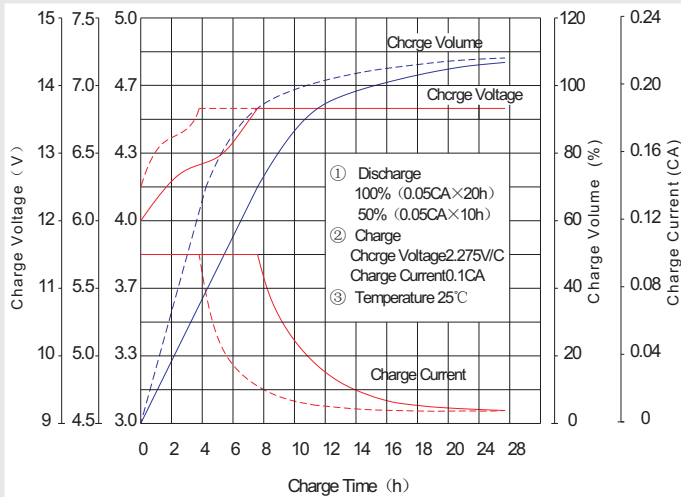
Life characteristics of cyclic use



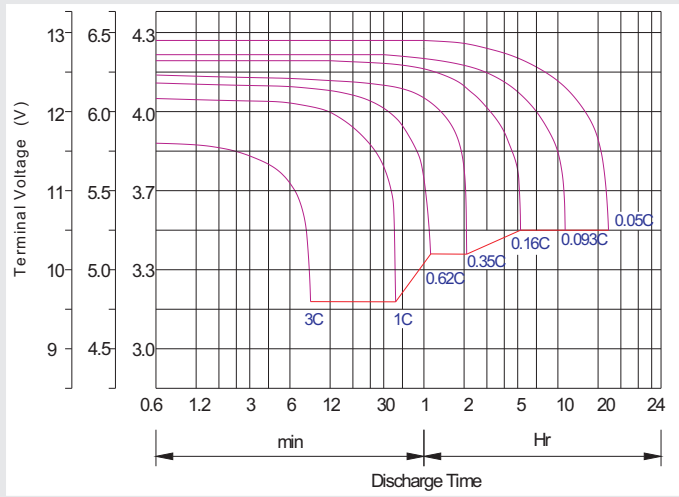
Storage characteristic



Charge characteristic curve for cyclic 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 cycle 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.