DC12-100(12V100Ah)

RITAR®

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@20hr-rate to 1.75V per cell @25℃
Weight	Approx. 29.0 Kg (Tolerance±3.0%)
Internal Resistance	Approx. 5.5 mΩ
Terminal	F12(M8)/F5(M8)
Max. Discharge Current	1000A (5 sec)
Design Life	12 years (floating charge)
Max. Charging Current	30.0 A
Reference Capacity	C3 76.4AH C5 86.1AH C10 95.2AH C20 100.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ 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 charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

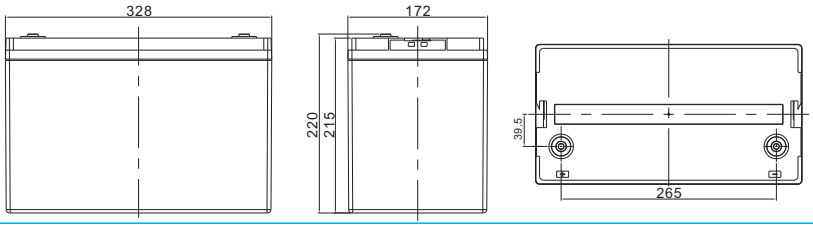


DC (Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharging. By using strong grids, thick plate and specially active material are designed for repeated deep-discharge applications. The DC series batteries offer 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 OHSAS 18001

MH 28539

Dimensions



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	230.7	184.6	108.9	60.74	36.17	28.17	22.10	18.80	12.06	10.00	5.183
1.65V	212.5	172.6	103.2	58.67	34.96	27.31	21.44	18.21	11.96	9.905	5.155
1.70V	196.9	162.3	97.81	56.79	34.03	26.15	20.78	17.72	11.77	9.714	5.090
1.75V	180.7	152.0	93.95	55.00	32.72	25.48	20.21	17.22	11.58	9.619	5.000
1.80V	164.4	139.2	90.49	52.56	31.60	25.00	19.74	17.00	11.39	9.524	4.952
1.85V	128.6	115.2	76.73	46.91	28.90	23.27	18.51	15.65	10.73	8.952	4.905

Constant Power Discharge Characteristics : WPC(25℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	392.8	322.0	197.9	114.0	68.39	53.50	42.59	35.58	23.50	19.61	10.35
1.65V	378.2	313.0	193.2	112.1	66.54	52.17	41.56	34.62	23.31	19.42	10.25
1.70V	353.0	296.3	183.9	108.8	64.88	50.17	40.23	33.76	23.03	19.05	10.16
1.75V	328.5	279.7	177.5	105.8	62.57	48.93	39.29	32.99	22.65	18.86	9.977
1.80V	302.6	258.5	171.8	101.4	61.15	48.65	38.53	32.54	22.28	18.67	9.885
1.85V	240.1	217.2	147.3	91.10	56.31	45.38	36.27	30.10	21.05	17.63	9.792

(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_{20} should reach 95% after the first cycle and 100% after the third cycle.

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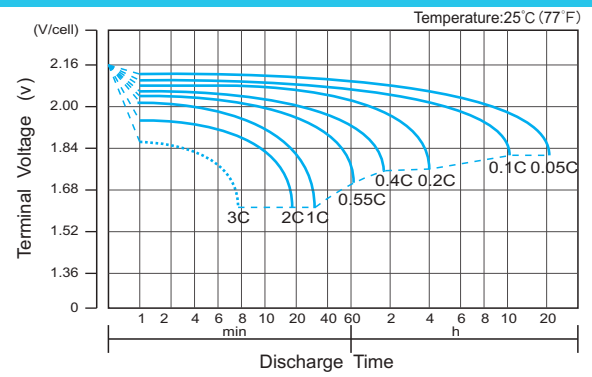
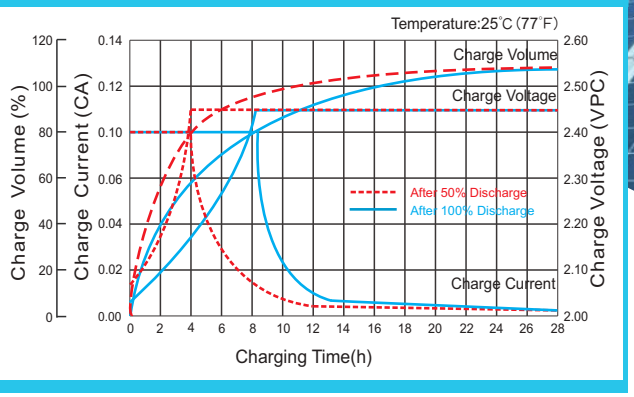
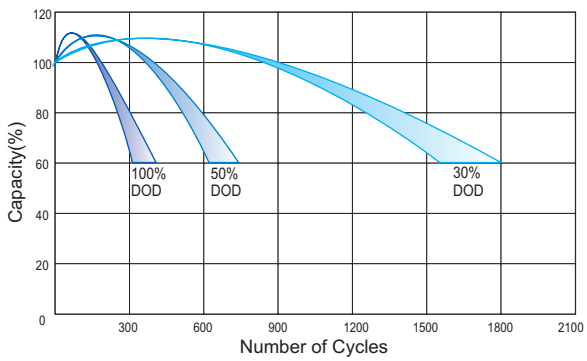
Discharge Characteristics Curve



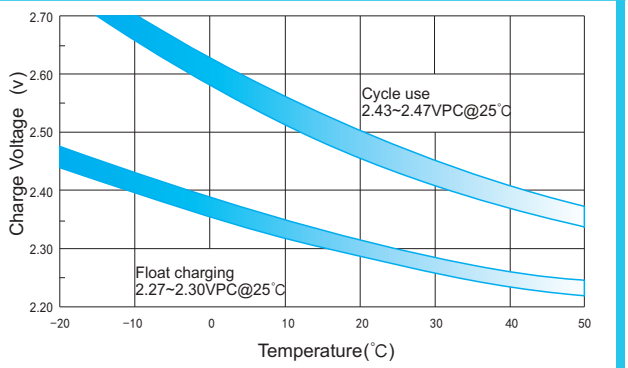
Charge Characteristic Curve for Cycle Use(IU)



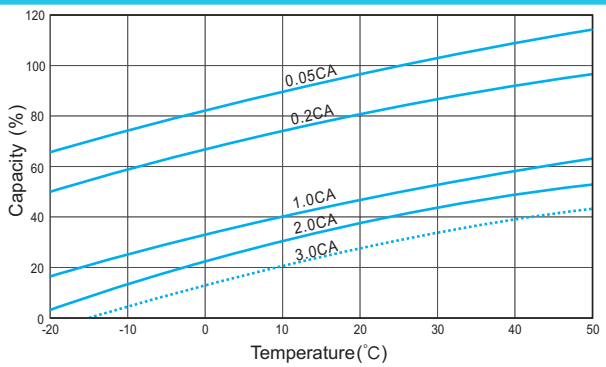
Cycle Life in Relation to Depth of Discharge



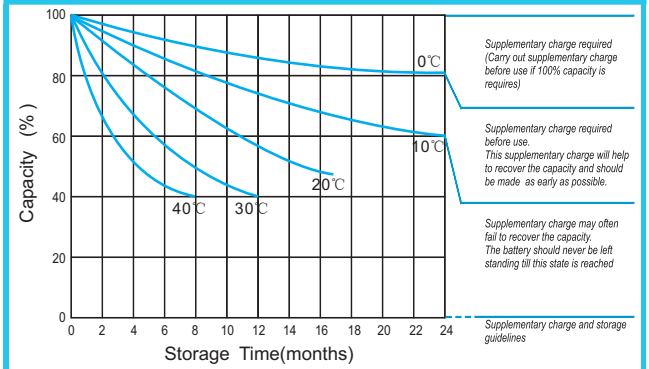
Relationship Between Charging Voltage and Temperature



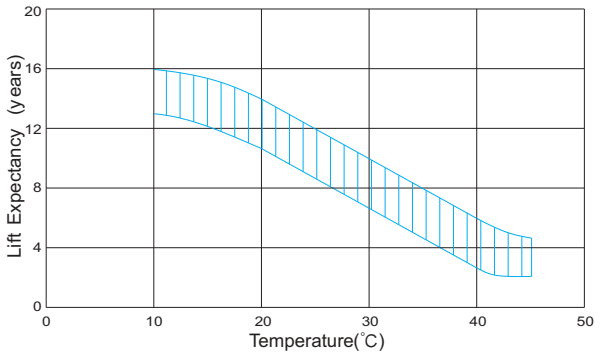
Temperature Effects on Capacity



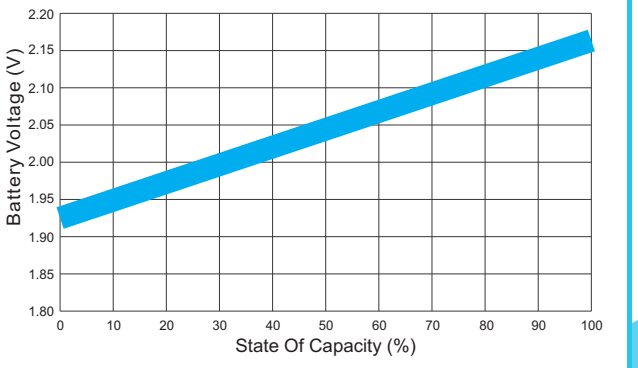
Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge(20℃)



(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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