

DG12-33(12V33Ah)



Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	33Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 9.6 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 13.0 mΩ
Terminal	F7(M8)/F11 (M6)
Max. Discharge Current	330A (5 sec)
Design Life	15 years (floating charge)
Max. Charging Current	6.6 A
Reference Capacity	C3 22.5AH C5 25.4AH C10 29.0AH C20 33.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°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 2% at 20°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



DG (Deep Cycle GEL) series is pure GEL battery with 15 years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the DG series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and it can offers 2 times cyclic life than the standard series. It is suitable for solar & wind system, marine, deep discharge UPS etc.



Dimensions

F11 TERMINAL

Length	195±2mm (7.68 inches)
Width	130±2mm (5.12 inches)
Height	155±2mm (6.10 inches)
Total Height	168±2mm (6.61 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	54.0	43.8	28.7	17.9	10.9	8.21	6.55	5.49	3.71	3.06	1.72
1.65V	51.1	41.9	27.6	17.3	10.6	7.96	6.37	5.35	3.67	3.03	1.69
1.70V	47.0	39.2	26.4	16.7	10.3	7.74	6.20	5.21	3.62	2.98	1.67
1.75V	43.0	36.5	25.2	16.1	9.89	7.51	6.04	5.08	3.57	2.94	1.65
1.80V	38.9	33.7	24.1	15.5	9.54	7.28	5.87	4.95	3.51	2.90	1.63
1.85V	31.8	28.0	20.8	13.9	8.74	6.73	5.45	4.62	3.29	2.73	1.55

Constant Power Discharge Characteristics : WPC(25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	104.4	87.0	59.3	38.3	23.6	17.8	14.3	12.0	8.24	6.84	3.84
1.65V	99.3	83.7	57.5	37.2	22.9	17.4	14.0	11.8	8.15	6.76	3.79
1.70V	94.2	80.3	55.6	36.2	22.3	16.9	13.6	11.5	8.06	6.68	3.75
1.75V	87.8	75.8	53.7	35.1	21.6	16.5	13.3	11.3	7.96	6.60	3.71
1.80V	80.9	71.0	51.8	33.9	21.0	16.1	13.0	11.0	7.85	6.52	3.67
1.85V	67.3	59.7	45.1	30.6	19.3	14.9	12.1	10.3	7.38	6.15	3.49

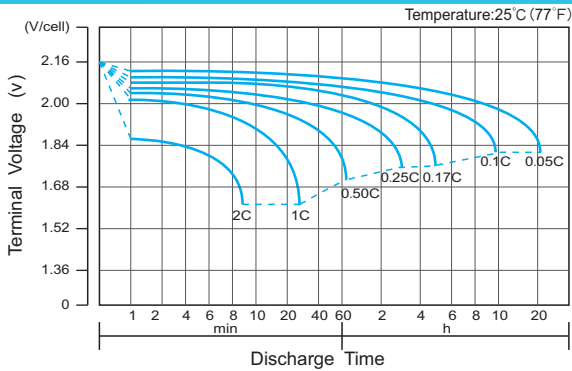
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

The battery must be fully charged before the capacity test. The C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

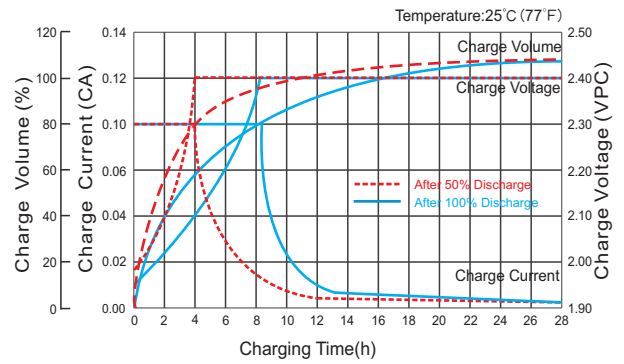
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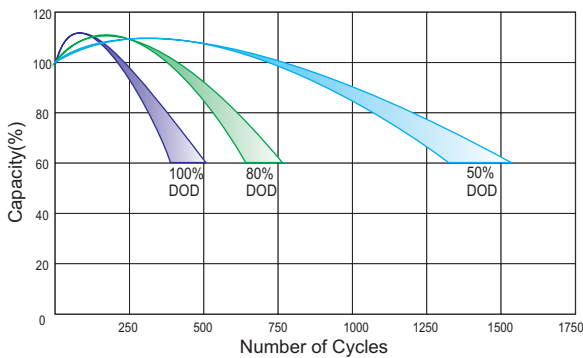
Discharge Characteristics Curve



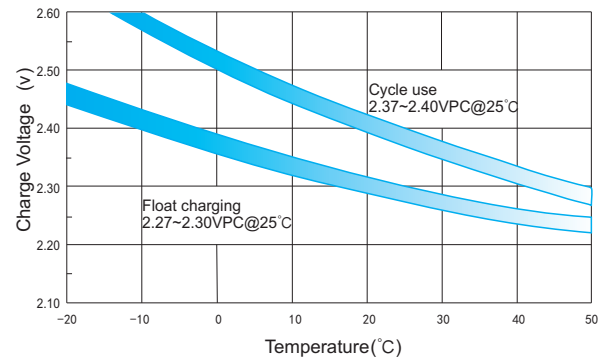
Charge Characteristic Curve for Cycle Use(IU)



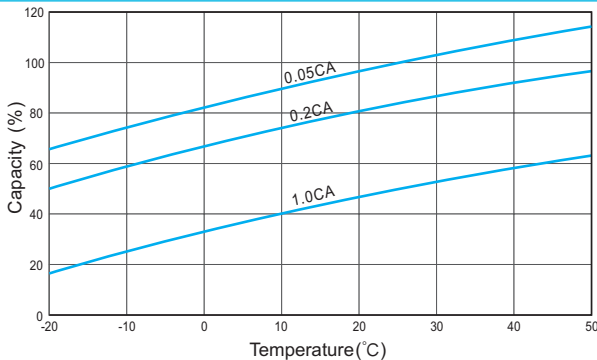
Cycle Life in Relation to Depth of Discharge



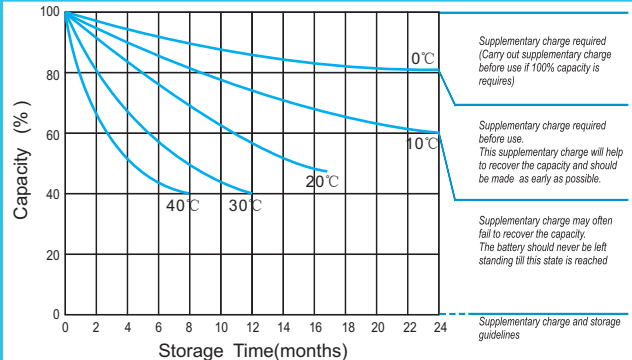
Relationship Between Charging Voltage and Temperature



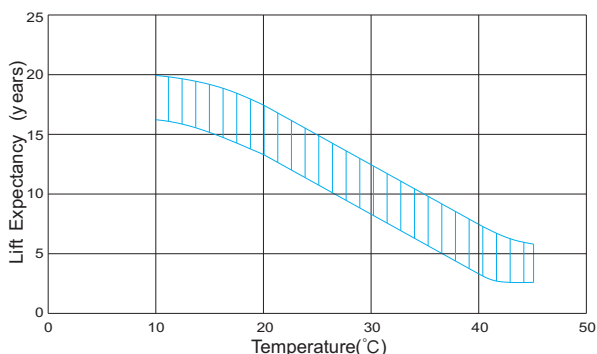
Temperature Effects on Capacity



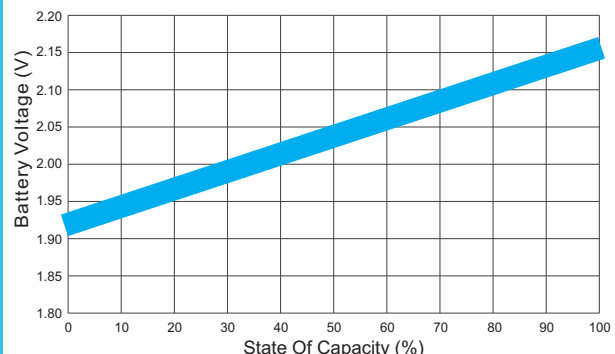
Storage Characteristics



Effect of Temperature on Long Term Life



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



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