

DG12-40(12V40Ah)



Specification

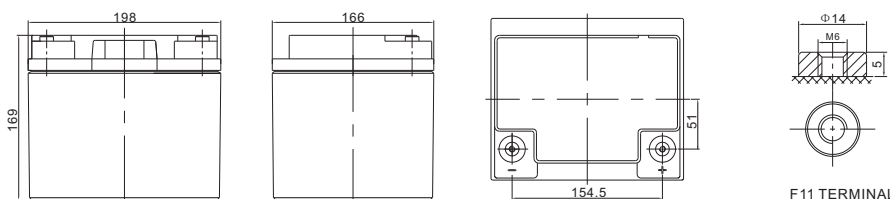


DG (Deep Cycle GEL) series is pure GEL battery with 15 years floating design life , it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the DG series offers excellent recovery capability after 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.



Cells Per Unit	6
Voltage Per Unit	12
Capacity	40Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 12.4 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 12.0 mΩ
Terminal	F4(M5)/F11 (M6)
Max. Discharge Current	400A (5 sec)
Design Life	15 years (floating charge)
Max. Charging Current	8.0 A
Reference Capacity	C3 27.3AH C5 30.8AH C10 35.2AH C20 40.0AH
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.

Dimensions



Length	198±2mm (7.80 inches)
Width	166±2mm (6.54 inches)
Height	169±2mm (6.65 inches)
Total Height	169±2mm (6.65 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	65.5	53.1	34.8	21.7	13.3	9.95	7.94	6.66	4.50	3.71	2.08
1.65V	61.9	50.8	33.5	21.0	12.8	9.64	7.72	6.49	4.45	3.67	2.05
1.70V	57.0	47.6	32.0	20.3	12.4	9.38	7.51	6.32	4.38	3.61	2.02
1.75V	52.1	44.3	30.6	19.6	12.0	9.10	7.32	6.16	4.32	3.57	2.00
1.80V	47.2	40.9	29.2	18.8	11.6	8.82	7.11	6.00	4.25	3.52	1.98
1.85V	38.6	33.9	25.2	16.9	10.6	8.15	6.61	5.60	3.99	3.31	1.88

Constant Power Discharge Characteristics : WPC(25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	126.5	105.5	71.9	46.4	28.6	21.6	17.3	14.6	10.0	8.30	4.66
1.65V	120.4	101.4	69.6	45.1	27.8	21.1	16.9	14.3	9.88	8.19	4.60
1.70V	114.2	97.3	67.4	43.9	27.0	20.5	16.5	13.9	9.77	8.09	4.54
1.75V	106.4	91.9	65.0	42.5	26.2	20.0	16.2	13.6	9.65	8.00	4.49
1.80V	98.0	86.0	62.8	41.1	25.4	19.5	15.7	13.3	9.51	7.90	4.45
1.85V	81.5	72.4	54.6	37.1	23.4	18.1	14.7	12.5	8.95	7.45	4.23

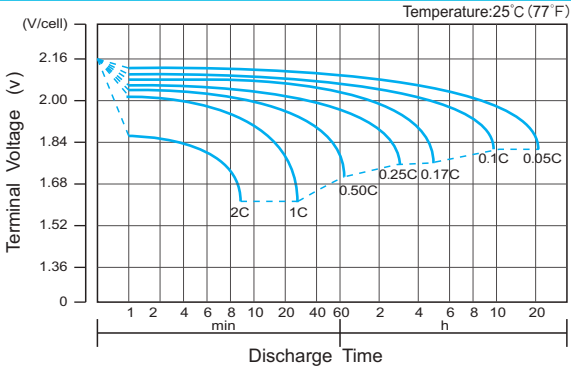
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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.

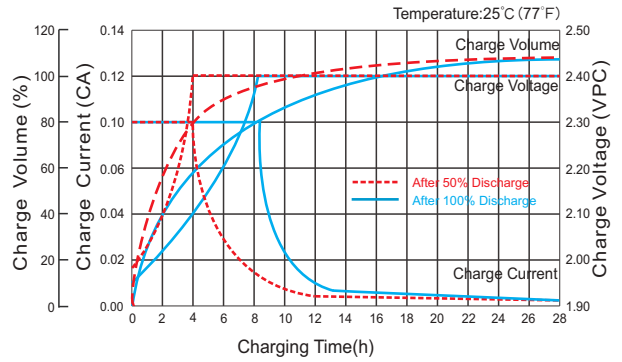
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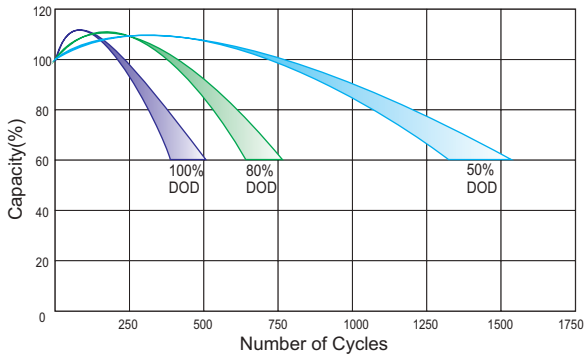
Discharge Characteristics Curve



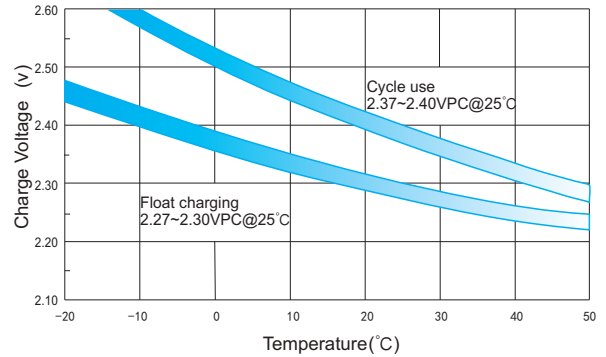
Charge Characteristic Curve for Cycle Use(IU)



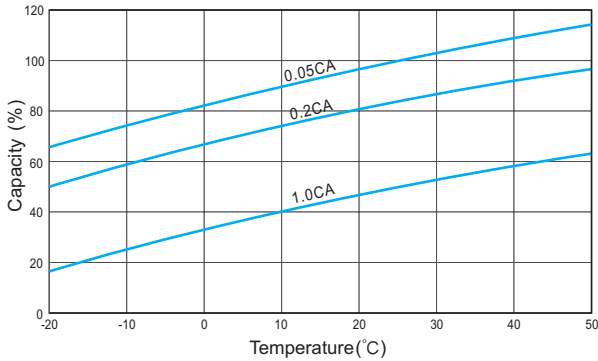
Cycle Life in Relation to Depth of Discharge



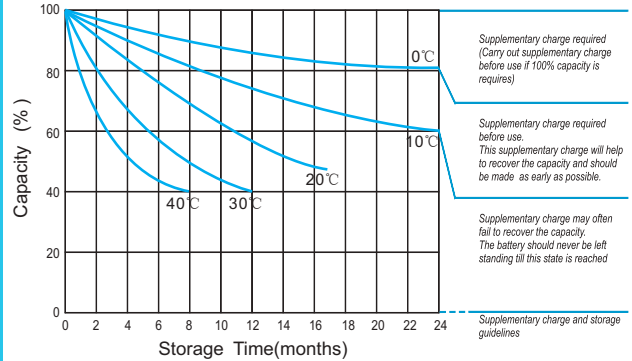
Relationship Between Charging Voltage and Temperature



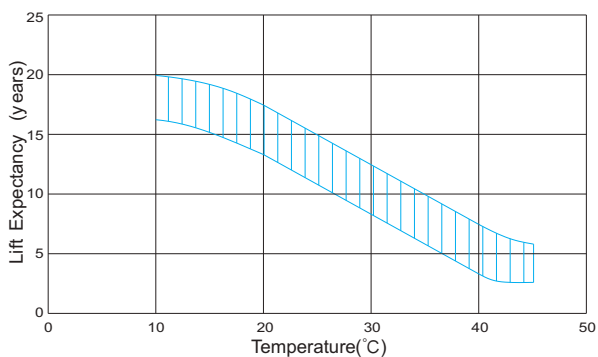
Temperature Effects on Capacity



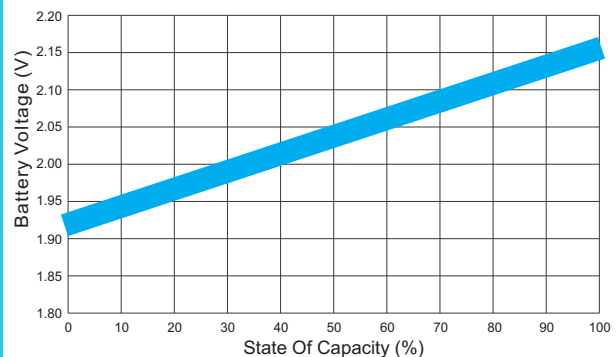
Storage Characteristics



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.