

# DG12-40 (12V40Ah)



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	40Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 13.2 Kg (Tolerance ±3%)
Internal Resistance	Approx. 9mΩ
Terminal	F4(M6)/F11 (M6)
Max. Discharge Current	400A (5 sec)
Design Life	15 years (floating charge)
Maximum Charging Current	8A
Reference Capacity	C3 27.3AH C5 31.5AH C10 35.1AH 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 3% at 25°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 can deliver 450 cycles at 100% DOD. Suitable for solar & wind system, CATV, marine, RV and deep discharge UPS, and telecommunication, etc.



## Dimensions

Length	198±1mm (7.80 inches)
Width	166±1mm (6.54 inches)
Height	169±1mm (6.65 inches)
Total Height	169±1mm (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	74.14	58.02	38.15	22.36	13.37	9.23	7.65	6.44	4.40	3.65	2.20
1.65V	70.54	56.83	37.52	22.26	13.27	9.20	7.61	6.40	4.36	3.61	2.12
1.70V	68.05	55.93	37.19	22.05	13.17	9.13	7.58	6.36	4.33	3.58	2.06
1.75V	63.55	53.88	37.27	21.84	13.07	9.09	7.51	6.29	4.29	3.54	2.00
1.80V	58.63	50.25	36.98	21.33	12.84	8.84	7.33	6.17	4.22	3.51	1.88
1.85V	53.01	45.59	34.96	20.26	12.27	8.46	6.98	5.91	4.04	3.40	1.80

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

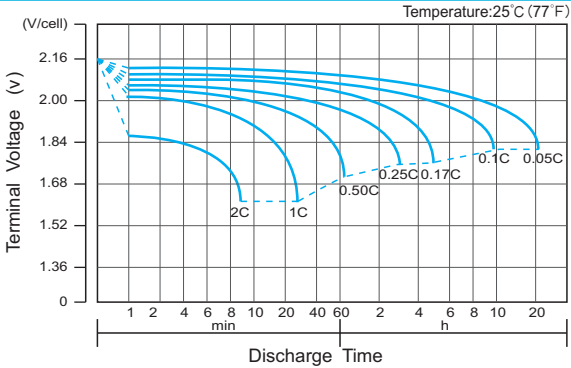
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	132	105	71.3	43.1	26.3	18.3	15.2	12.8	8.75	7.27	3.89
1.65V	128	104	70.5	43.0	26.1	18.3	15.2	12.8	8.71	7.22	3.82
1.70V	124	103	70.7	42.6	26.0	18.2	15.1	12.7	8.65	7.16	3.75
1.75V	117	99	70.9	42.2	25.8	18.2	15.0	12.6	8.58	7.09	3.68
1.80V	109	92.5	70.5	41.5	25.5	17.7	14.7	12.3	8.44	7.02	3.61
1.85V	99.8	84.3	67.0	39.7	24.5	16.9	14.0	11.8	8.08	6.81	3.40

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

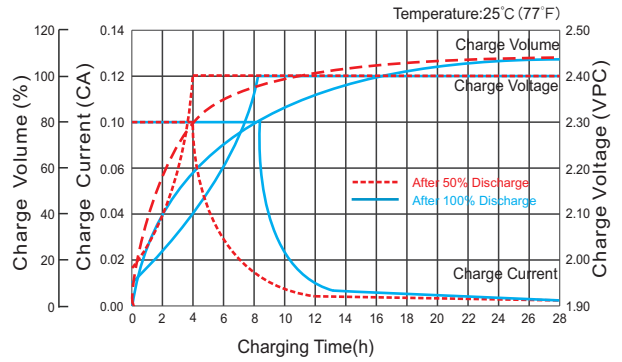
# DG12-40(12V40Ah)



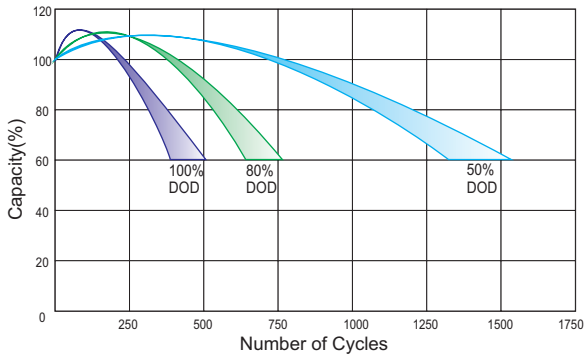
## Discharge Characteristics Curve



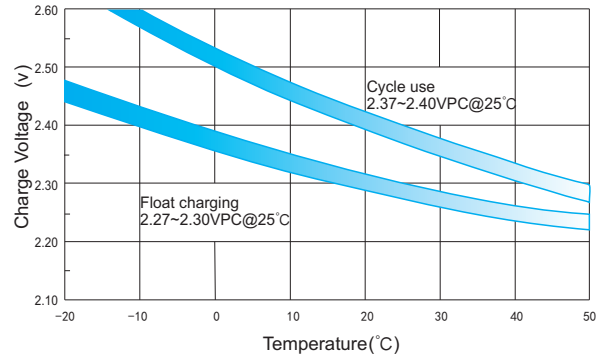
## Charge Characteristic Curve for Cycle Use(IU)



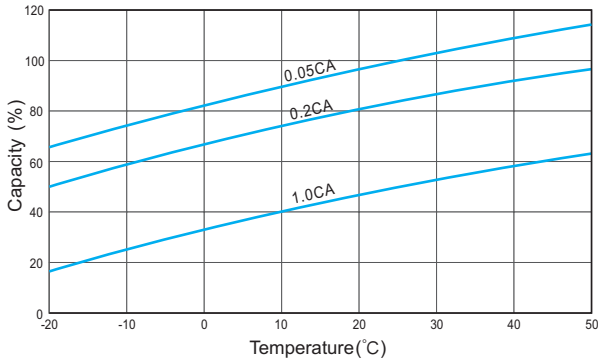
## Cycle Life in Relation to Depth of Discharge



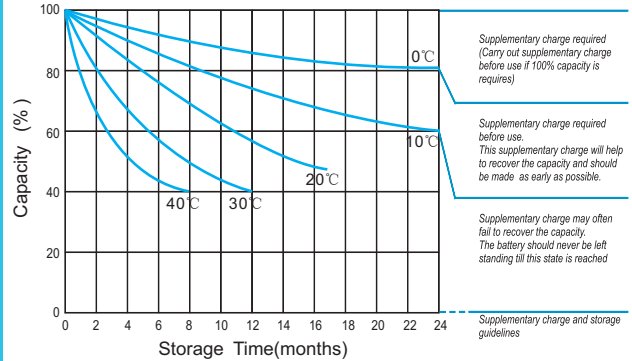
## Relationship Between Charging Voltage and Temperature



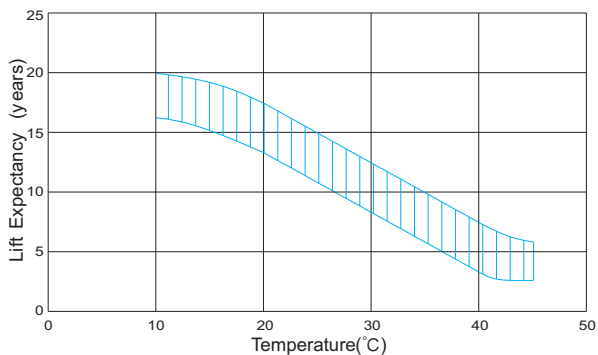
## Temperature Effects on Capacity



## Storage Characteristics



## Effect of Temperature on Long Term Life



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

