

# DG12-80S(12V80Ah)



## Specification



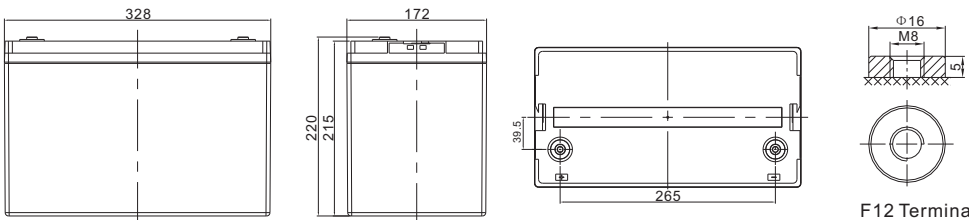
DG (Deep Cycle GEL ) series is pure GEL battery with 15 years floating design life , it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the DG series offers excellent recovery capability after 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	80Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 24.0 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 8.5 mΩ
Terminal	F12(M8)/F5(M8)
Max. Discharge Current	800A (5 sec)
Design Life	15 years (floating charge)
Max. Charging Current	16.0 A
Reference Capacity	C3 54.6AH C5 61.5AH C10 70.4AH C20 80.0AH
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	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°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	127.0	104.1	69.0	43.4	26.5	19.9	15.9	13.3	9.00	7.43	4.16
1.65V	120.1	99.5	66.2	42.0	25.7	19.3	15.4	13.0	8.90	7.34	4.10
1.70V	110.5	93.2	63.3	40.6	24.9	18.8	15.0	12.6	8.77	7.23	4.05
1.75V	101.2	86.7	60.5	39.1	24.0	18.2	14.6	12.3	8.64	7.13	4.00
1.80V	91.6	80.1	57.8	37.6	23.1	17.6	14.2	12.0	8.50	7.04	3.96
1.85V	74.8	66.5	49.8	33.7	21.2	16.3	13.2	11.2	7.98	6.63	3.76

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

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	245.4	206.8	142.4	92.8	57.2	43.2	34.6	29.2	20.0	16.6	9.32
1.65V	233.5	198.8	137.9	90.2	55.6	42.1	33.8	28.5	19.8	16.4	9.20
1.70V	221.6	190.7	133.4	87.7	54.1	41.1	33.0	27.9	19.5	16.2	9.08
1.75V	206.5	180.1	128.8	85.0	52.4	40.0	32.3	27.3	19.3	16.0	8.98
1.80V	190.2	168.6	124.3	82.2	50.8	38.9	31.5	26.7	19.0	15.8	8.90
1.85V	158.2	141.9	108.2	74.2	46.8	36.2	29.4	24.9	17.9	14.9	8.47

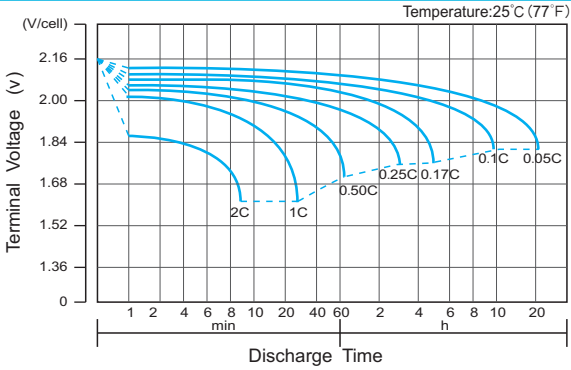
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

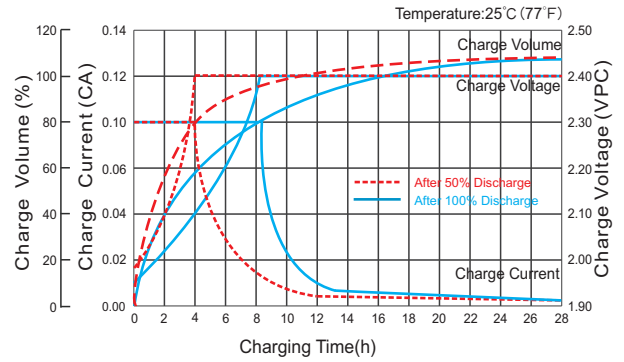
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## Discharge Characteristics Curve



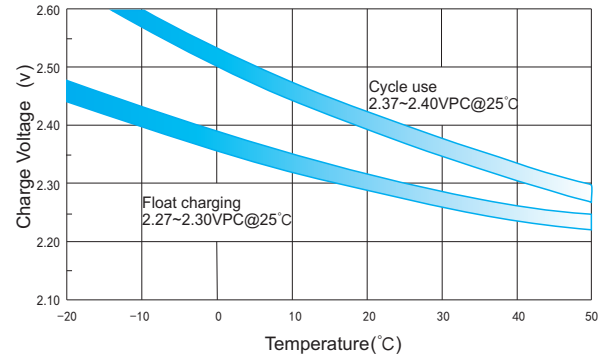
## Charge Characteristic Curve for Cycle Use(IU)



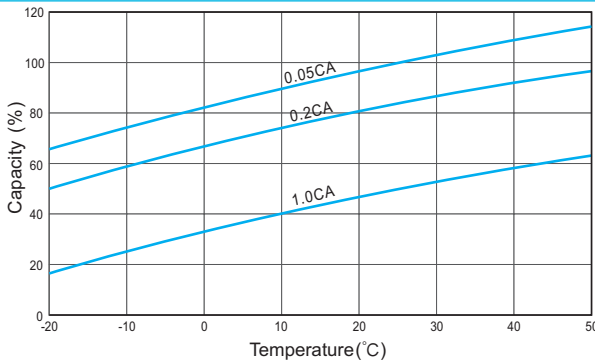
## Cycle Life in Relation to Depth of Discharge



## Relationship Between Charging Voltage and Temperature



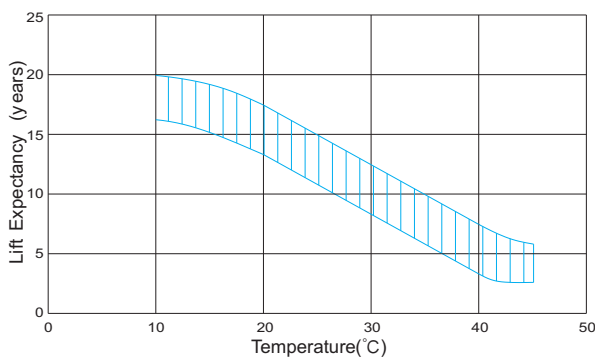
## Temperature Effects on Capacity



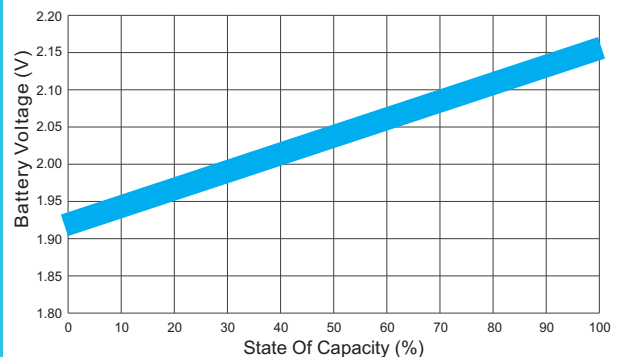
## Storage Characteristics



## 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.