

# RA12-100DG (12V110Ah)



## Specification

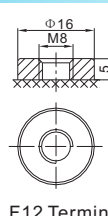
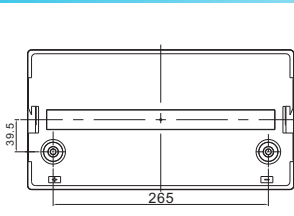
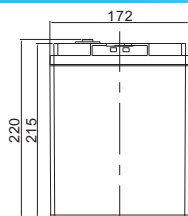
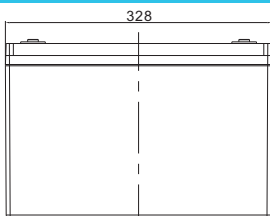


DG (Deep Cycle GEL ) series is pure GEL battery with 15 years floating design life , it is ideal for solar offgrid system. By using strong grids, high purity lead and patented Gel electrolyte, the DG series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and can deliver 450 cycles at 100% DOD.



<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	110Ah@100hr-rate to 10.5V per cell @25 °C
<b>Weight</b>	Approx. 30.0 Kg (Tolerance ±2%)
<b>Internal Resistance</b>	Approx. 7.5 mΩ
<b>Terminal</b>	F12(M8)/F5 (M8)
<b>Max. Discharge Current</b>	1000A (5 sec)
<b>Design Life</b>	15 years (floating charge)
<b>Maximum Charging Current</b>	20.0 A
<b>Reference Capacity</b>	C10 87.7Ah C20 100.0Ah C100 110.0Ah
<b>Float Charging Voltage</b>	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C
<b>Normal Operating Temperature Range</b>	25°C ±5°C
<b>Self Discharge</b>	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.
<b>Container Material</b>	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

F12 Terminal

Unit: mm

### Constant Current Discharge Characteristics : A(25°C)

F.V./Time	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	48HR	72HR	100HR	120HR
1.60V	55.9	33.4	23.1	19.1	16.1	11.0	9.12	5.50	2.17	1.52	1.14	0.98
1.65V	55.6	33.2	23.0	19.0	16.0	10.9	9.03	5.30	2.15	1.51	1.13	0.97
1.70V	55.1	32.9	22.8	18.9	15.9	10.8	8.95	5.15	2.12	1.49	1.12	0.96
1.75V	54.6	32.7	22.7	18.8	15.7	10.7	8.86	5.00	2.10	1.48	1.11	0.95
1.80V	53.3	32.1	22.1	18.3	15.4	10.6	8.77	4.70	2.08	1.46	1.10	0.94
1.85V	50.7	30.7	21.1	17.4	14.8	10.1	8.51	4.50	2.02	1.42	1.06	0.91

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

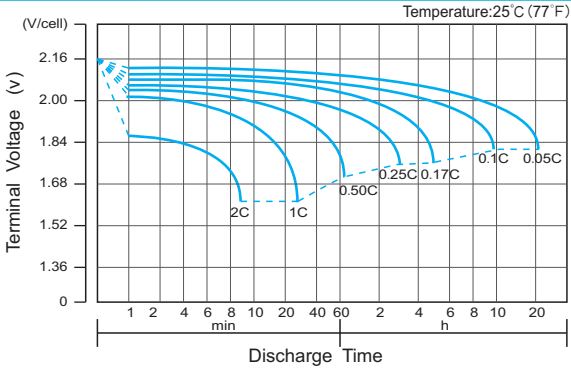
F.V./Time	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	48HR	72HR	100HR	120HR
1.60V	108	65.7	45.8	38.0	32.0	21.9	18.2	9.73	4.31	3.03	2.27	1.95
1.65V	107	65.3	45.8	37.9	31.9	21.8	18.1	9.56	4.29	3.01	2.26	1.94
1.70V	107	64.9	45.6	37.9	31.8	21.6	17.9	9.38	4.25	2.98	2.24	1.92
1.75V	106	64.5	45.4	37.5	31.4	21.5	17.7	9.20	4.21	2.95	2.21	1.90
1.80V	104	63.6	44.2	36.7	30.9	21.1	17.5	9.03	4.17	2.92	2.19	1.89
1.85V	99.2	61.3	42.3	34.9	29.5	20.2	17.0	8.50	4.04	2.84	2.13	1.83

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

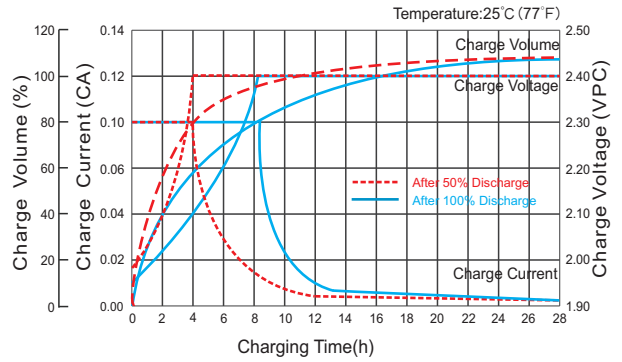
# DG12-100(12V110Ah)



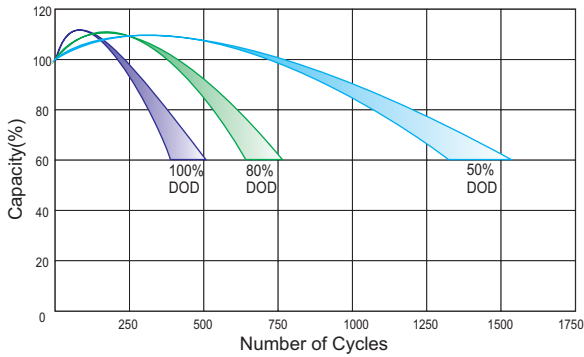
## Discharge Characteristics Curve



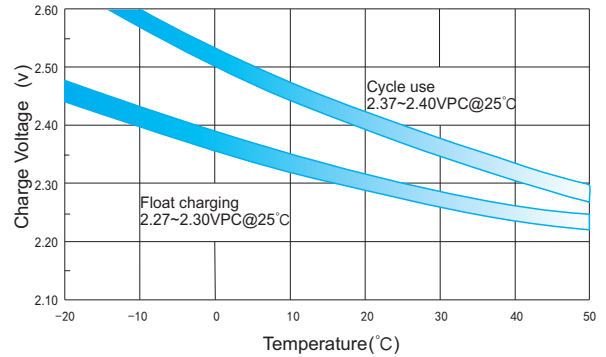
## Charge Characteristic Curve for Cycle Use(IU)



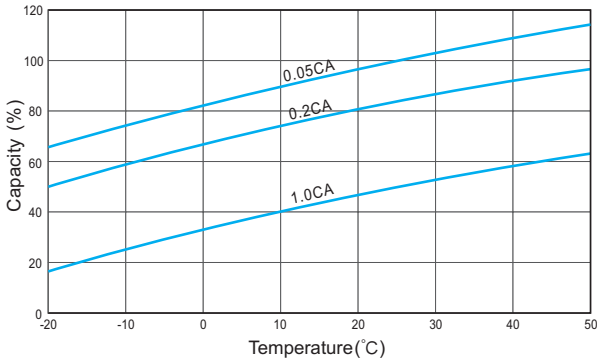
## Cycle Life in Relation to Depth of Discharge



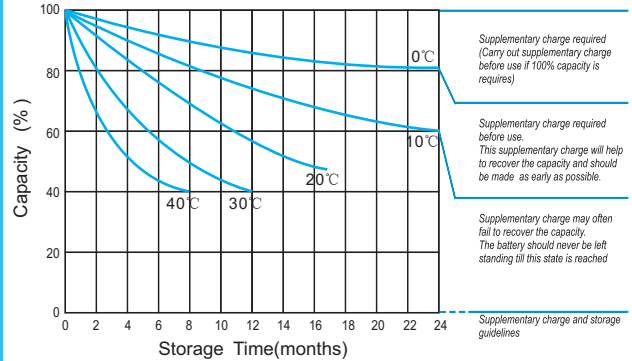
## Relationship Between Charging Voltage and Temperature



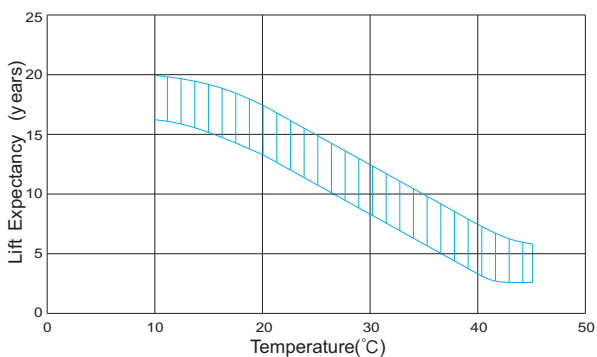
## Temperature Effects on Capacity



## Storage Characteristics



## Effect of Temperature on Long Term Life



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

