



# RA12-100G (12V100Ah)

RA12-100G is GEL Standby battery with 10 + years floating design life time .The solid Gel protects no way to suffer electrolyte stratification and ensure mild corrosion, **its** special separator eradicates infection between plates to prevent short circuit. it offers extra-durable performance under extreme temperature.



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 30.0 Kg
Max. Discharge Current	1000 A (5 sec)
Internal Resistance	Approx. 7.5 mΩ
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
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	20 A
Equalization and Cycle Service	14.2 to 14.4 VDC/unit Average at 25°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Terminal F5/F12
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



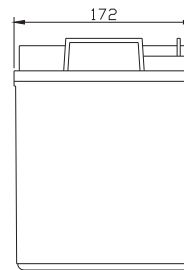
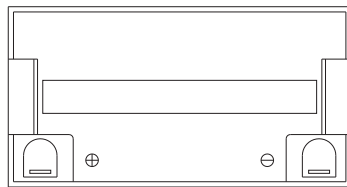
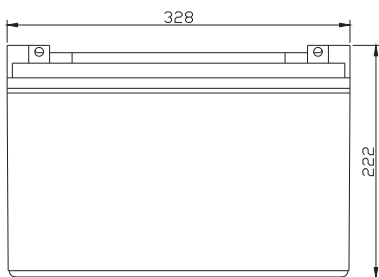
G4M20206-0910-E-16



ISO9001:2000 Certificate

## Dimensions

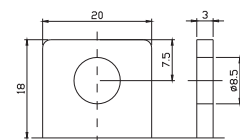
Unit: mm Dimension: 328(L)×172(W)×222(H)



Terminal F12



Terminal F5



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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	262.0	195.1	152.7	100.4	58.84	35.19	24.30	20.13	16.95	11.58	9.602	5.123
10.0V	254.4	185.6	149.5	98.74	58.57	34.92	24.21	20.04	16.85	11.48	9.509	5.030
10.2V	246.9	179.1	147.2	97.86	58.03	34.66	24.02	19.94	16.75	11.39	9.417	4.937
10.5V	224.3	167.2	141.8	98.07	57.48	34.39	23.93	19.76	16.55	11.29	9.325	4.844
10.8V	204.8	154.3	132.2	97.33	56.12	33.78	23.28	19.29	16.25	11.11	9.232	4.751
11.1V	176.9	139.5	120.0	91.99	53.32	32.28	22.25	18.36	15.55	10.63	8.955	4.471

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	2764	2078	1664	1127	679.9	414.8	289.2	239.9	202.2	138.2	114.7	61.43
10.0V	2709	2014	1638	1114	678.3	412.6	289.3	239.6	201.7	137.6	114.0	60.36
10.2V	2678	1961	1619	1117	673.1	410.1	288.0	239.1	201.0	136.7	113.0	59.24
10.5V	2467	1848	1563	1120	667.0	407.1	286.9	236.9	198.6	135.5	111.9	58.13
10.8V	2273	1723	1461	1112	654.7	401.9	279.1	231.5	195.0	133.3	110.8	57.01
11.1V	2020	1576	1330	1058	626.7	387.0	267.0	220.3	186.6	127.6	107.5	53.65

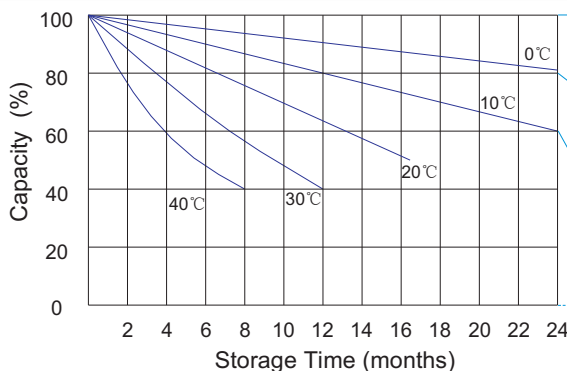
All mentioned values are average values.



### Effect of temperature on long term float life



### Storage characteristic



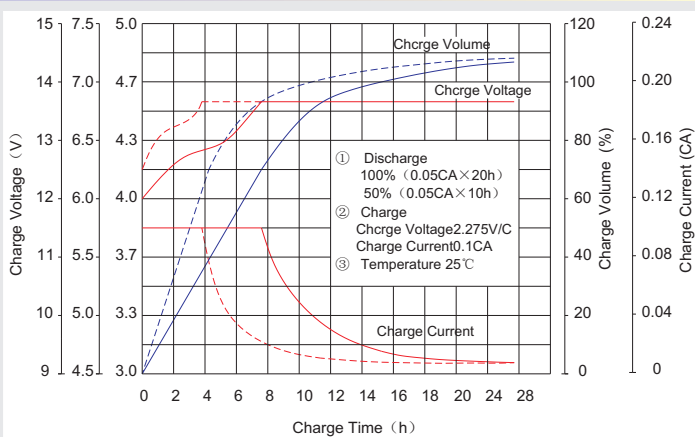
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

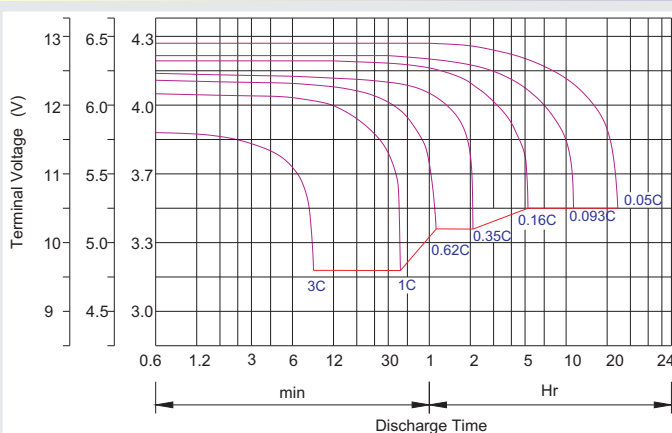
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

### Charge characteristic Curve for standby use



### Discharge characteristic Curve



### Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

### Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

**Charge the batteries at least once every six months, if they are stored at 25°C.**

Charging Method:

Constant Voltage	-0.2Cx2h+2.35-2.4V/cellx24h, Max. Current 0.2CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h

### Maintenance & Cautions

<b>Float Service:</b>
※ Every month, recommend inspection every battery voltage.
※ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 100% rate capacity discharge.
Charge: Max. current 0.2CA, constant voltage 2.35-2.4V/Cell charge 24h.
※ Effect of temperature on float charge voltage: -3mV/°C/Cell.
※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.