



# RA12-100G (12V100Ah)

RA12-100G is GEL Standby battery with 12 years+ design life time in float charging use. Ritar Gel battery are featured with low self-discharge, good consistence on deep discharge, long cyclic life, low floating charging voltage and current, free from erosion, pollution, gas escape, and leakage, as well as beneficial to environmental protection.



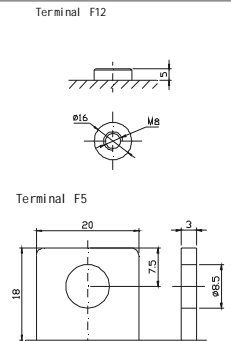
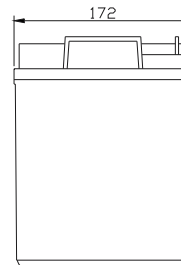
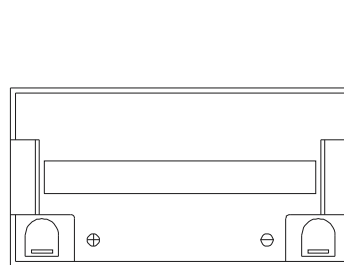
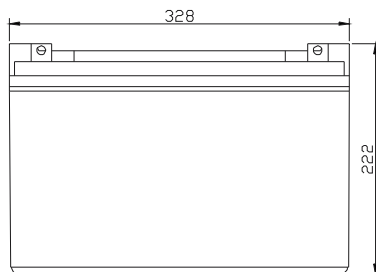
## Specification

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	100Ah @ 10hr-rate to 1.75V per cell @ 25°C
<b>Weight</b>	Approx. 30.6 Kg
<b>Max. Discharge Current</b>	500 A (5 sec)
<b>Internal Resistance</b>	Approx. 10 mΩ
<b>Operating Temperature Range</b>	Discharge: -30°C~60°C Charge: -20°C~50°C Storage: -30°C~60°C
<b>Normal Operating Temperature Range</b>	25°C±5°C
<b>Float charging Voltage</b>	13.6 to 13.8 VDC/unit Average at 25°C
<b>Recommended Maximum Charging Current Limit</b>	30 A
<b>Equalization and Cycle Service</b>	14.1 to 14.3 VDC/unit Average at 25°C
<b>Self Discharge</b>	RITAR batteries can be stored for more than 12 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
<b>Terminal</b>	Terminal F5/F12
<b>Container Material</b>	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



## Dimensions

Unit: mm



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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	342	245	178	105	60.8	37.3	24.4	20.2	15.9	11.9	10.1	5.3
1.67V	333	233	175	103	60.5	37.0	24.3	20.1	15.8	11.8	10.0	5.2
1.70V	314	225	172	103	59.9	36.7	24.1	20.0	15.7	11.7	9.9	5.1
1.75V	282	208	164	100	59.4	36.5	24.0	19.8	15.5	11.6	9.8	5.0
1.80V	254	189	151	96	58.0	35.8	23.4	19.4	15.2	11.4	9.7	4.9
1.85V	221	169	135	90	55.1	34.2	22.3	18.4	14.6	11.0	9.4	4.7

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	614	449	330	198	116	71.5	46.9	38.9	30.7	23.1	18.9	10.0
1.67V	601	428	323	195	115	71.2	46.8	38.8	30.5	23.0	18.7	9.9
1.70V	567	414	319	193	114	70.6	46.6	38.6	30.4	22.8	18.6	9.8
1.75V	511	383	304	189	113	69.9	46.3	38.3	30.1	22.6	18.4	9.7
1.80V	460	348	280	180	111	68.9	45.2	37.3	29.6	22.1	18.2	9.6
1.85V	397	309	250	169	105	65.7	42.9	35.5	28.1	21.3	17.7	9.2

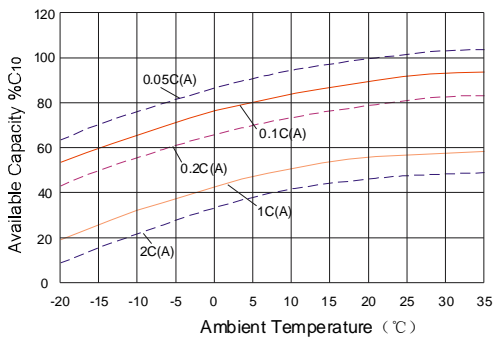
All mentioned values are average values.

# RA12-100G

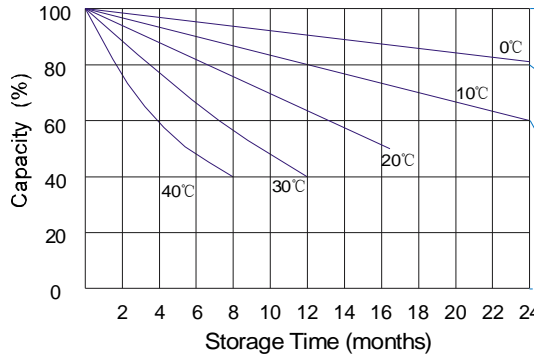
12V100Ah



## Temperature effects curve



## Storage characteristic



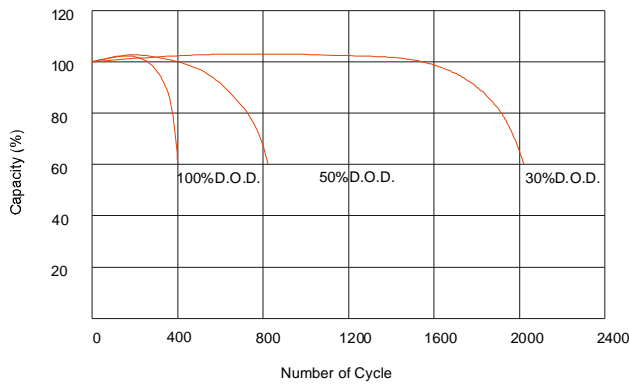
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

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

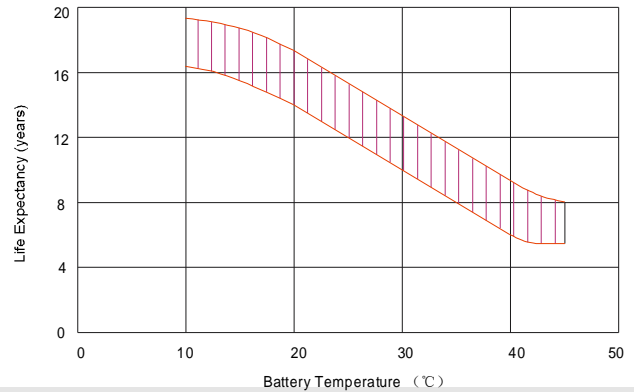
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

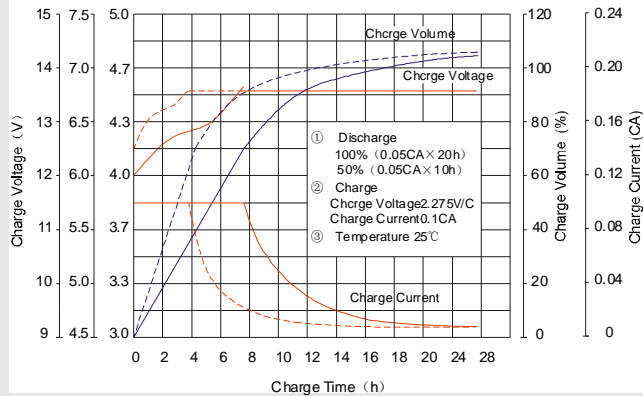
## Life characteristics of cyclic use



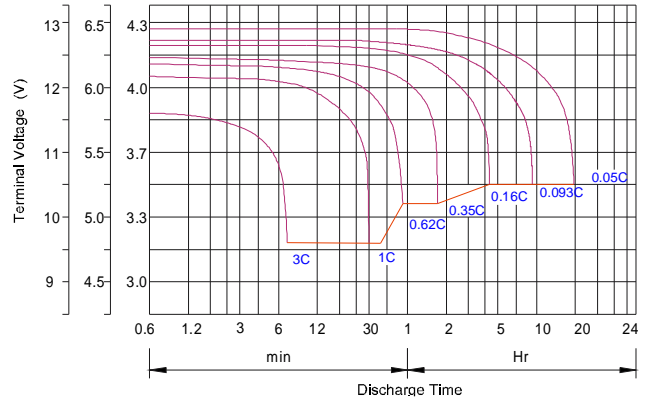
## Effect of temperature on long term float life



## Charge characteristic Curve for standby use



## Discharge characteristic Curve



## Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.2	14.1~14.3	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

## 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	-0.2C x2h +14.1~14.3V,24h,Max. Current 0.2CA
Constant Current	-0.2Cx2h +0.1CAx12h

## Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.10	7.05~7.15	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C

## SHEN ZHEN RITAR POWER CO.,LTD.

Room 405, Tower C, Huahan Building, Langshan Road 16, North High-tech Industrial Park, Nanshan District, Shenzhen, 518057, China

URL: [www.ritarpower.com](http://www.ritarpower.com) Tel: +86-755-33981668 Fax: 86-755-83475180