



# RA12-100 (12V100Ah)

RA12-100 is a general purpose battery with 8~10 years expected life under normal float charge. As with all RITAR batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 32Kg
Max. Discharge Current	800A(5sec)
Internal Resistance	Approx. 5mΩ
Operating Temperature Range	Discharge: -20°C~50°C Charge: 0°C~50°C Storage: -20°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	30A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C
Self Discharge	RITAR batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
Terminal	Faston F5/Thread insert & Bolt
Container Material	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



MH28539



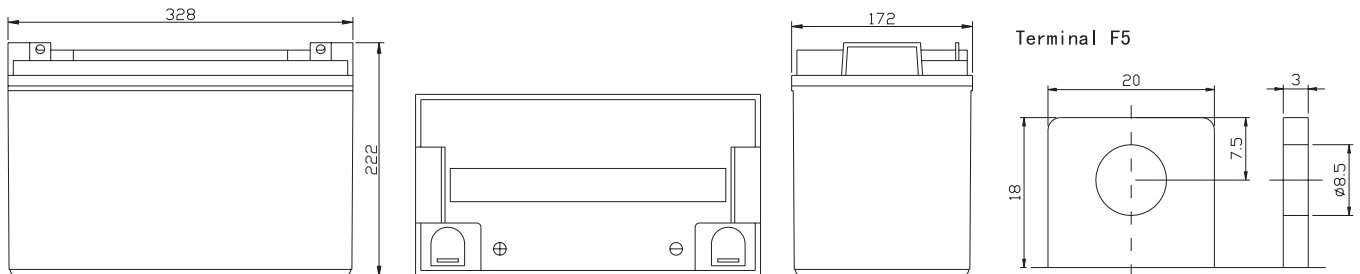
G4M20206-0910-E-16



ISO9001:2000 Certificate

## Dimensions

Unit: mm



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

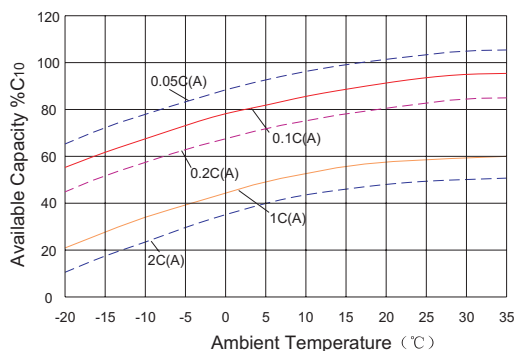
F.V/Time	1MIN	5MIN	10MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	5HR	8HR	10HR	12HR	24HR
1.60V	387	350	240	175	105	77.4	61.8	37.0	26.0	16.9	11.5	9.8	8.3	4.4
1.65V	371	322	225	172	103	76.6	60.0	37.0	26.0	16.9	11.5	9.8	8.3	4.4
1.70V	356	299	211	164	100	75.8	60.0	37.0	26.0	16.9	11.5	9.8	8.3	4.4
1.75V	312	266	195	155	98.0	73.5	58.8	35.6	25.2	16.5	11.4	9.6	8.2	4.4
1.80V	278	240	181	148	95.0	72.8	57.6	35.0	24.5	16.2	10.9	9.2	7.8	4.1
1.85V	202	172	139	118	87.4	65.4	52.1	33.1	23.6	15.3	10.3	8.6	7.7	4.1

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

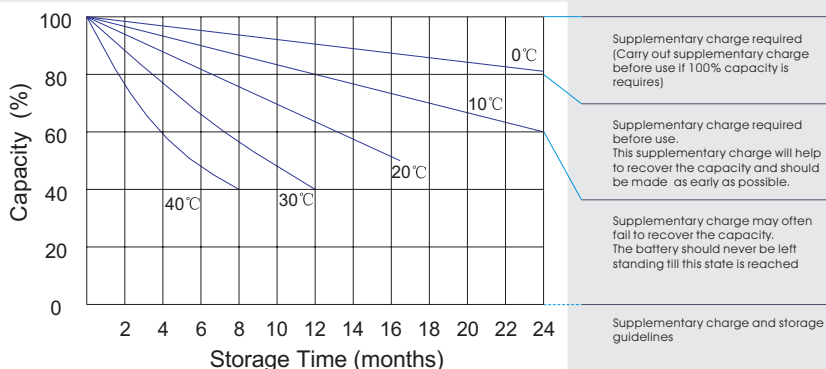
F.V/Time	1MIN	5MIN	10MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	5HR	8HR	10HR	12HR	24HR
1.60V	637	577	398	310	198	149	120	71	50	33	23	18	16	8.2
1.65V	623	547	393	307	194	147	116	70	50	33	23	18	16	8.2
1.70V	608	511	383	302	189	143	113	70	50	33	23	18	16	8.2
1.75V	555	476	358	284	164	142	112	69	49	32	22	18	16	8.2
1.80V	501	427	333	267	156	139	110	67	48	32	22	18	15	8.2
1.85V	402	342	276	233	142	128	105	65	47	30	20	17	15	7.7

All mentioned values are average values.

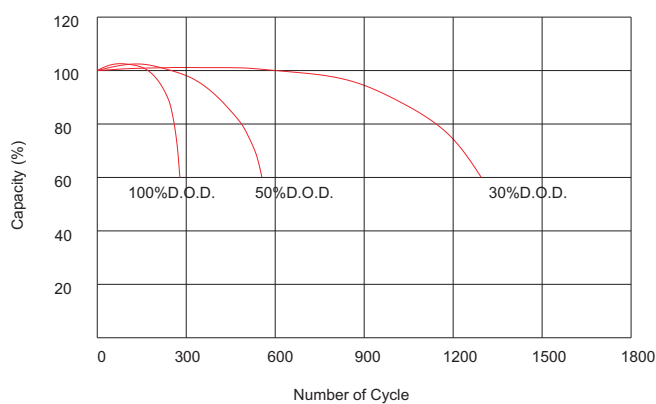
### Temperature effects curve



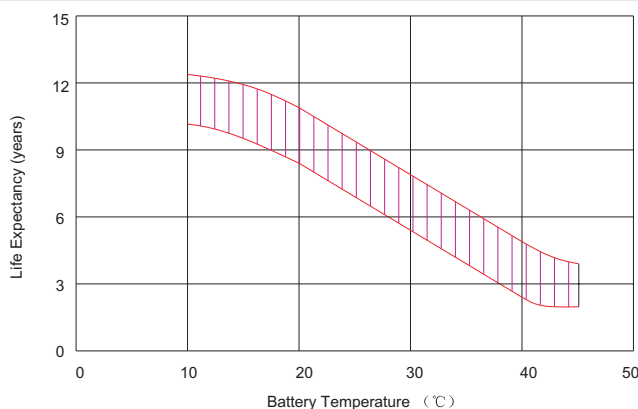
### Storage characteristic



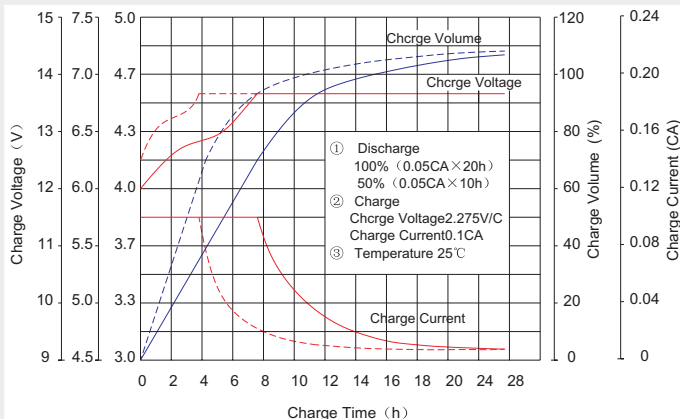
### Life characteristics of cyclic use



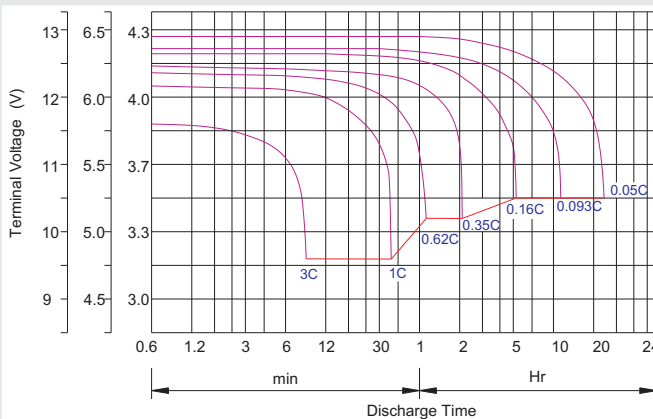
### Effect of temperature on long term float life



### 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	14.7	14.4~15.0	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	14.4~15.0V, 5~11h, Max. Current 0.1CA
Constant Current	0.1CA × 5h
Fast	0.3CA × 1.7h

### Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C

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