



RA12-110F (12V110Ah)

RA12-110F is front terminal type, designed for Telecom and UPS use with 10 years life time based Eurobat standard. As with all Ritar batteries, all front terminal models are rechargeable, highly efficient, leak proof and maintenance free.



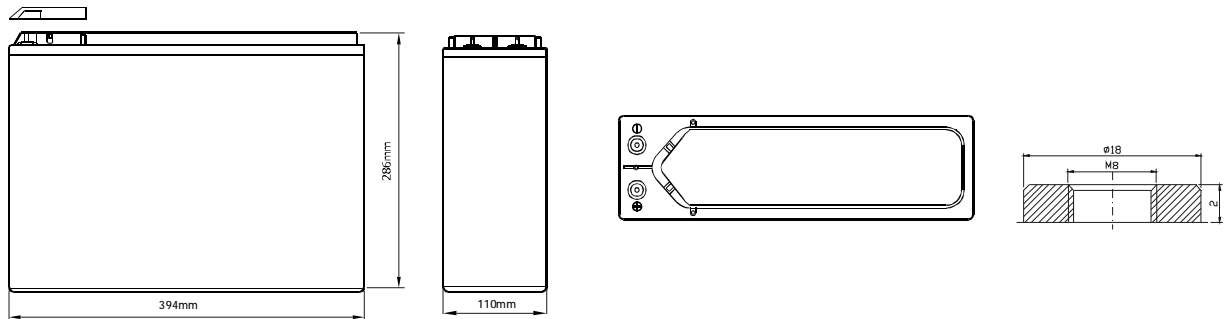
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	110Ah@ 10hr-rate to 1.75V per cell @ 25°C
Weight	Approx. 32.0 Kg
Max. Discharge Current	500 A (5 sec)
Internal Resistance	Approx. 5 mΩ
Operating Temperature Range	Discharge: -20°C~60°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	30.0 A
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	Terminal F9
Container Material	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)

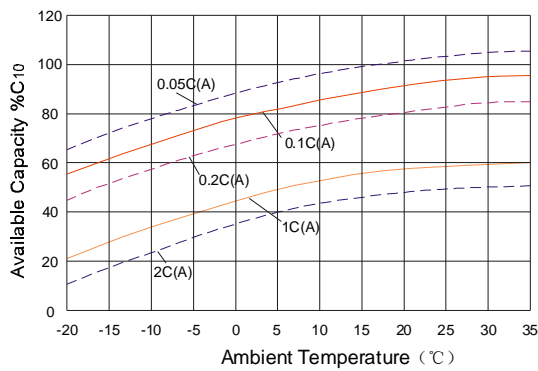
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	411	295	215	127	72	44	29	24	19	14	11	6
1.67V	400	281	210	124	71	44	29	24	19	13	11	6
1.70V	377	271	207	123	71	43	28	24	18	13	11	6
1.75V	339	250	197	120	70	43	28	23	18	13	11	6
1.80V	306	228	182	115	68	42	28	23	18	13	11	6
1.85V	266	204	163	108	65	40	26	22	17	12	11	5

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

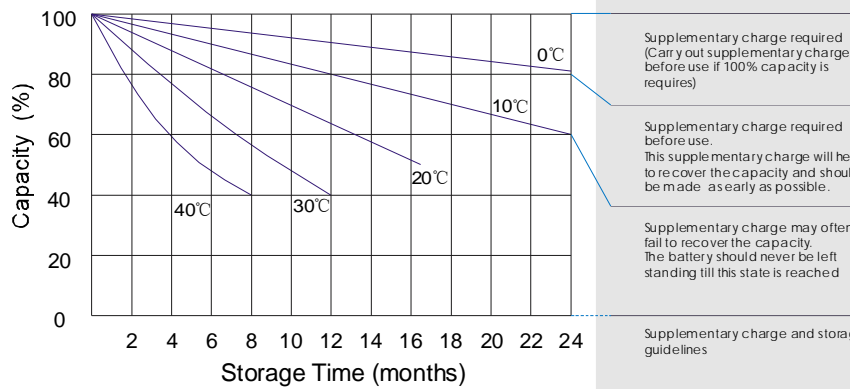
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	738	539	397	238	136	84	55	46	36	26	21	11
1.67V	722	515	389	235	136	84	55	46	36	26	21	11
1.70V	682	498	384	232	135	83	55	45	36	26	21	11
1.75V	614	460	366	227	133	82	54	45	35	26	21	11
1.80V	552	418	336	217	130	81	53	44	35	25	21	11
1.85V	477	371	300	203	123	77	50	42	33	24	20	10

All mentioned values are average values.

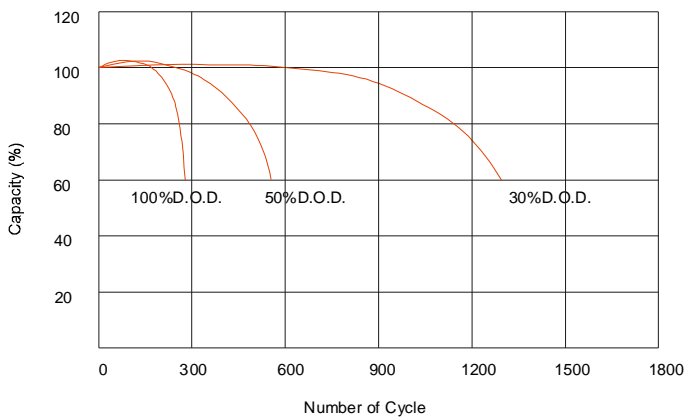
Temperature effects curve



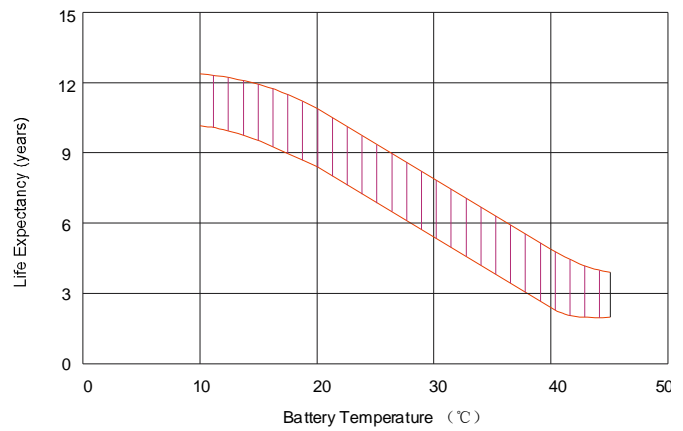
Storage characteristics



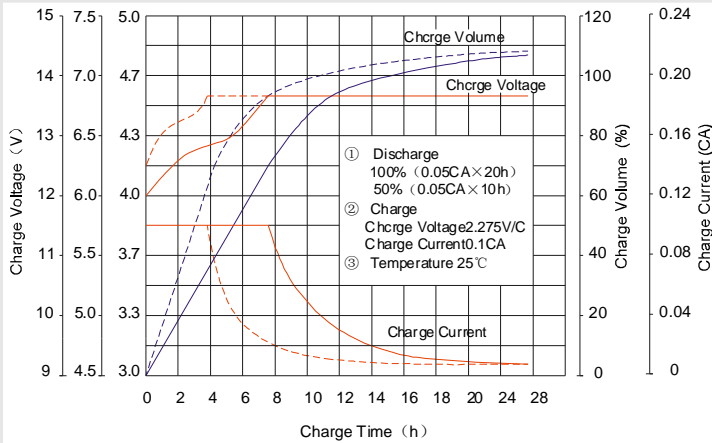
Life characteristics of cyclic use



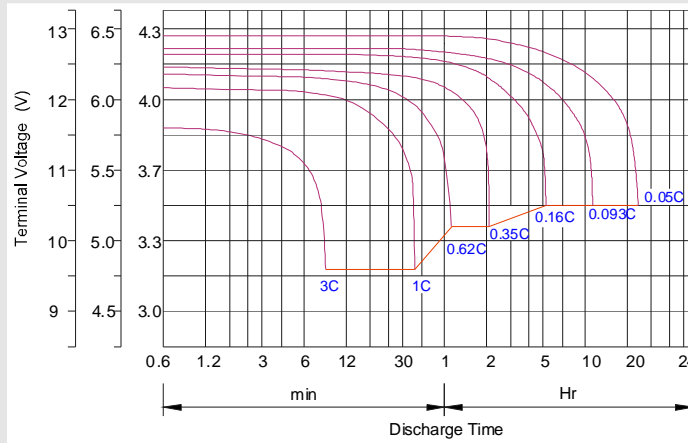
Effect of temperature on long term float life



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	-0.2Cx2h + 14.4~15.0V, 24h, Max. Current 0.3CA
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	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C