



# RA12-60(12V60Ah)

## Specification

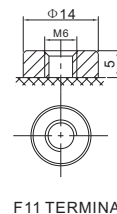
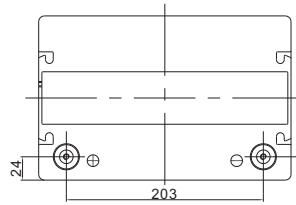
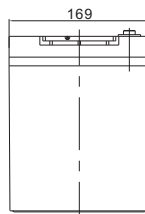
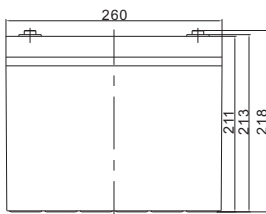
Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	60Ah@10hour-rate to 1.80V per cell @25°C
Weight	Approx. 20.5 Kg (Tolerance ±2.0%)
Internal Resistance	Approx. 6.0 mΩ
Terminal	F15(M6)/F11(M6)
Max. Discharge Current	600A (5 sec)
Short Circuit Current	1380A
Design Life	12 years (Float charging)
Recommended Maximum Charging Current	18 A
Reference Capacity	C3 46.6AH C5 53.6AH C10 60.0AH C20 63.4AH
Standby Use Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
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
Self Discharge	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 charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS and YDT standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.



## Dimensions



Length	260±2mm (10.2 inches)
Width	169±2mm (6.65 inches)
Height	211±2mm (8.31 inches)
Total Height	218±2mm (8.58 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

F11 TERMINAL

Unit: mm

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	210.5	147.4	109.9	63.59	37.31	22.35	16.42	13.33	11.26	7.52	6.40	3.28
1.65V	202.9	143.0	107.0	62.19	36.62	22.03	16.20	13.17	11.13	7.44	6.33	3.25
1.70V	193.0	137.2	103.2	60.34	35.71	21.59	15.91	12.95	10.95	7.34	6.25	3.22
1.75V	180.3	129.8	98.28	57.93	34.50	21.02	15.52	12.65	10.72	7.21	6.15	3.17
1.80V	164.3	120.3	91.95	54.80	32.93	20.26	15.01	12.27	10.42	7.03	6.00	3.11
1.85V	144.6	108.3	83.94	50.80	30.91	19.28	14.35	11.76	10.02	6.80	5.81	3.03

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

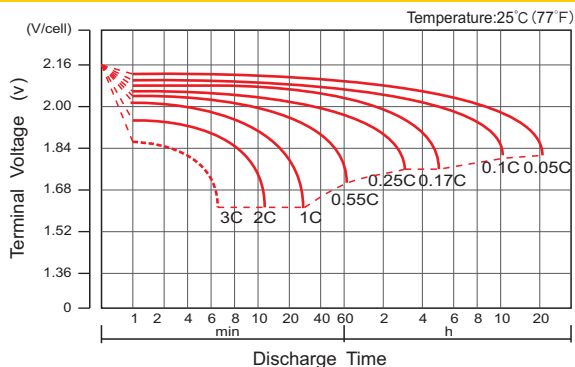
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	362.4	254.3	195.0	117.2	70.82	43.00	31.82	25.98	22.02	14.91	12.76	6.56
1.65V	358.5	253.2	193.9	116.4	70.24	42.68	31.59	25.79	21.88	14.80	12.67	6.52
1.70V	344.9	245.8	188.6	113.5	68.72	41.97	31.10	25.42	21.58	14.62	12.51	6.45
1.75V	328.0	236.6	182.2	110.1	66.74	41.04	30.48	24.94	21.20	14.38	12.31	6.36
1.80V	304.0	223.1	172.9	105.2	64.00	39.76	29.60	24.26	20.67	14.06	12.04	6.25
1.85V	272.3	204.5	160.1	98.51	60.50	38.04	28.42	23.35	19.95	13.62	11.68	6.09

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

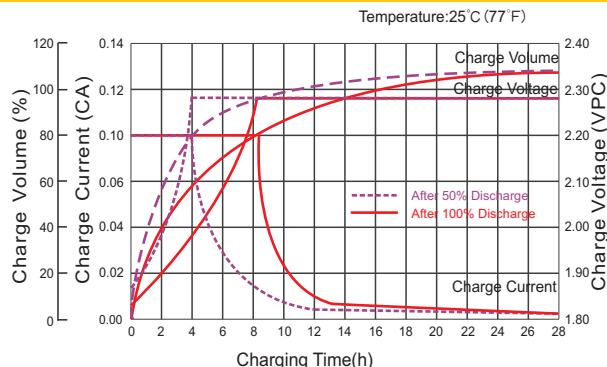
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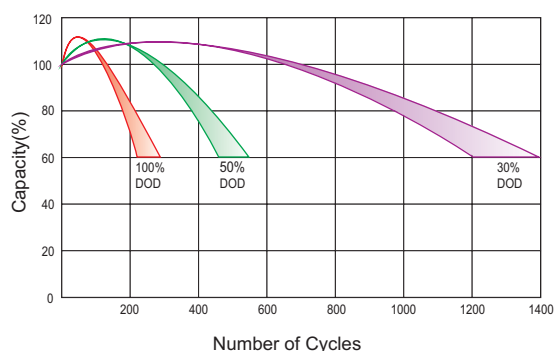
## Discharge Characteristics Curve



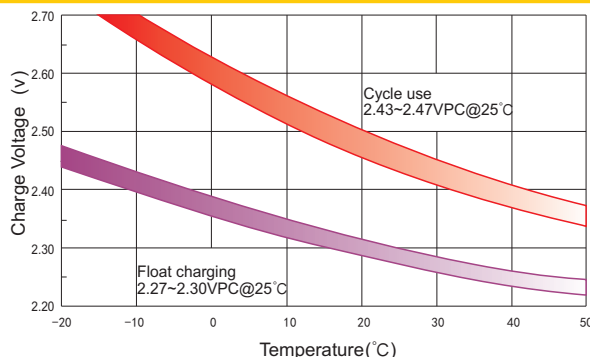
## Charge Characteristic Curve For Standby Use



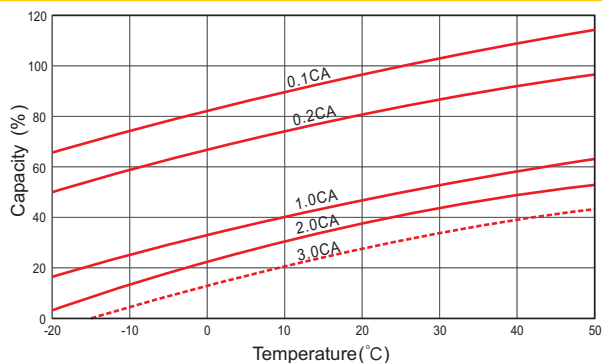
## Cycle Life In Relation To Depth Of Discharge



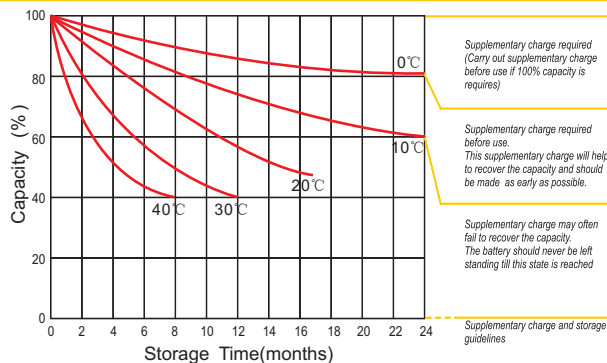
## Relationship Between Charging Voltage And Temperature



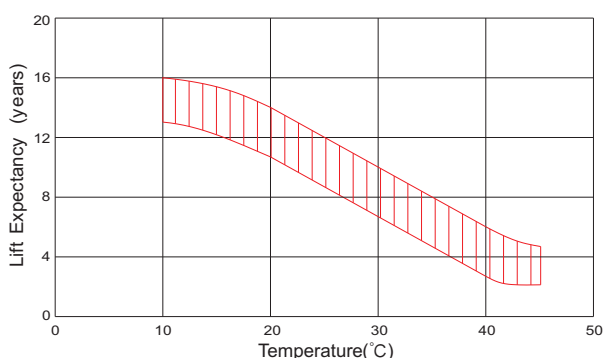
## Temperature Effects On Capacity



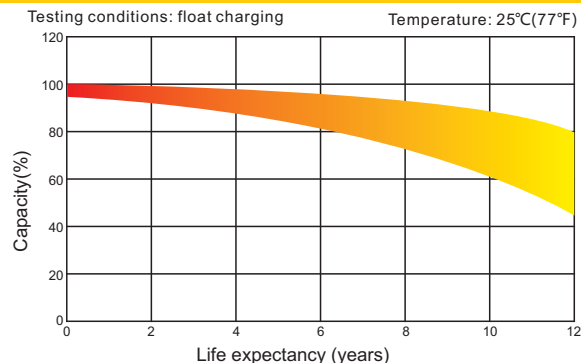
## Storage Characteristics



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.