

EV12-45(12V45Ah)

RITAR®

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	45Ah@10hr-rate to 1.80V per cell @25˚C
Weight	Approx. 14.6 Kg (Tolerance±3.0%)
Internal Resistance	Approx. 7.0 mΩ
Terminal	F4(M6)/F11(M6)
Max. Discharge Current	450A (5 sec)
Cold Cranking Ampere(CCA)	315A
Maxi. Charging Current	13.5A
Reference Capacity	C3 34.9AH C5 39.3AH C10 45.0AH C20 47.6AH
Float Charging 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 charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

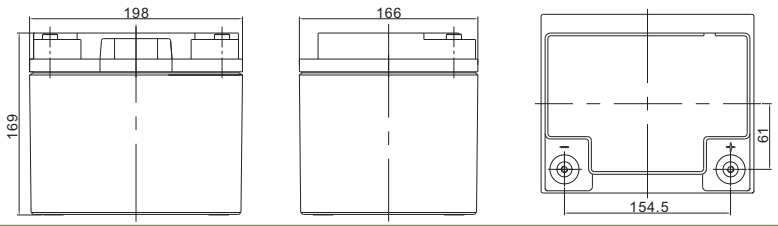


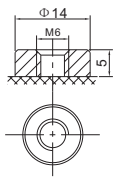
EV (Electric Vehicle) series is specially designed for frequent discharge deep cycle application. By using the specially designed active material, strong grids and thick plate construction, the EV series battery offers reliable performance in high load situations and could provide competitive cycle performance. It is suitable for Electric Vehicle and Golf cart, Floor Machines, Forklifts, Aerial lifts, Robotics, Marine, RV, Mobility and Medical Equipment, and most outdoor application.

ISO 9001 ISO 14001 OHSAS 18001

MH 28539 G4M20206-0910-E-16

Dimensions





F11 TERMINAL

Length	198±2mm (7.80 inches)
Width	166±2mm (6.54 inches)
Height	169±2mm (6.65 inches)
Total Height	169±2mm (6.65 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

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	151.4	114.2	85.94	50.26	27.77	16.40	12.70	9.99	8.50	5.71	4.75	2.48
1.65V	145.9	107.9	82.16	48.26	26.82	15.87	12.31	9.72	8.28	5.65	4.69	2.44
1.70V	138.8	99.4	76.95	46.12	25.95	15.35	11.98	9.45	8.06	5.56	4.62	2.41
1.75V	129.6	91.0	71.61	44.08	25.00	14.81	11.62	9.21	7.86	5.48	4.56	2.38
1.80V	118.1	82.34	66.12	42.14	24.04	14.28	11.26	8.94	7.66	5.39	4.50	2.36
1.85V	103.9	67.29	54.87	36.29	21.56	13.09	10.41	8.31	7.14	5.06	4.24	2.24

Constant Power Discharge Characteristics : WPC(25˚C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	260.5	194.2	150.2	91.3	52.2	31.1	24.3	19.2	16.4	11.2	9.33	4.89
1.65V	257.8	187.0	145.8	88.6	50.7	30.2	23.6	18.7	16.0	11.1	9.23	4.82
1.70V	248.0	175.3	138.6	85.5	49.3	29.4	23.1	18.3	15.7	10.9	9.10	4.77
1.75V	235.8	163.4	130.8	82.6	47.8	28.5	22.5	17.9	15.3	10.8	9.00	4.71
1.80V	218.6	150.5	122.5	79.7	46.3	27.6	21.9	17.4	15.0	10.6	8.89	4.67
1.85V	195.8	125.2	103.1	69.3	41.7	25.4	20.3	16.3	14.0	9.99	8.38	4.44

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The C_{10} should reach 95% after the first cycle and 100% after the third cycle.



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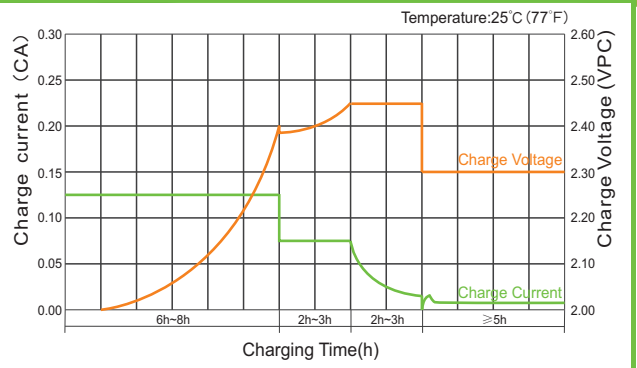
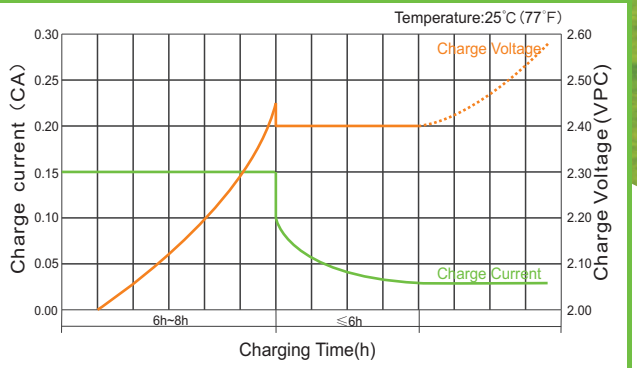
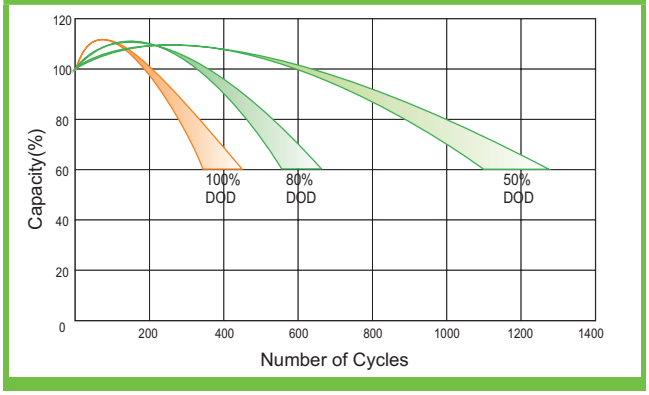
Charge Characteristic Curve for Cycle Use(IIUU)



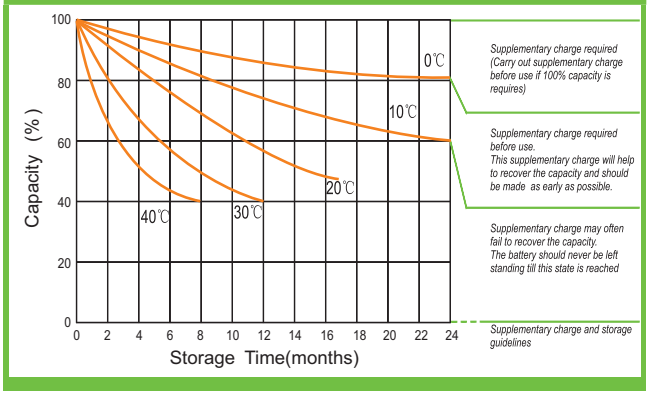
Charge Characteristic Curve For Cycle Use(IUI)



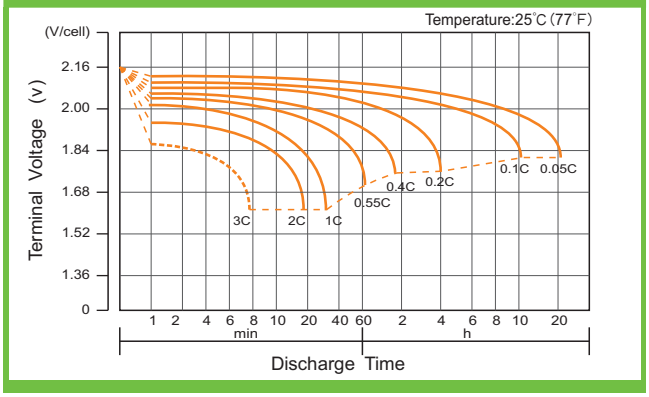
Cycle Life in Relation to Depth of Discharge



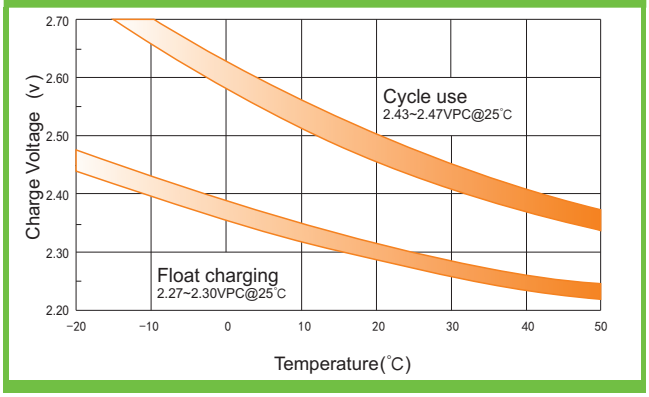
Storage Characteristics



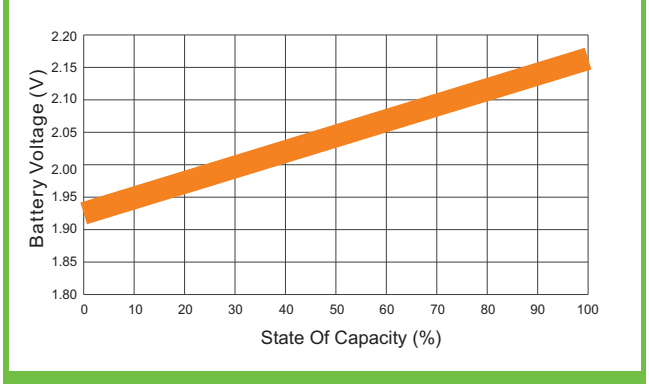
Discharge Characteristics Curve



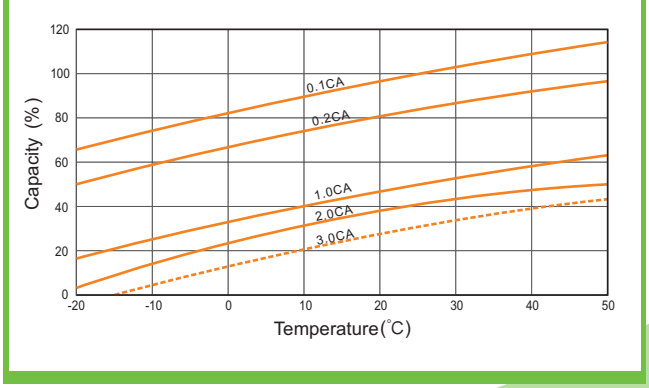
Relationship Between Charging Voltage and Temperature



Relationship of OCV And State of Charge(20℃)



Temperature Effects on Capacity



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

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