



RL2450X (2V450Ah)

RL 2450X is a general purpose battery with 18 years floating design life. With heavy duty grid, thick plates, special additives, RL series battery maintain very long life time and stable performance.



Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	450Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 28.0 Kg
Max. Discharge Current	2250 A (5 sec)
Internal Resistance	Approx. 0.65 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	2.27 to 2.3 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	90 A
Equalization and Cycle Service	2.43 to 2.47 VDC/unit Average at 25°C
Self Discharge	RITAR batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Thread insert & Bolt (F10)
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



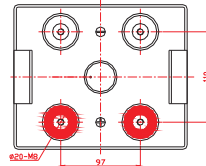
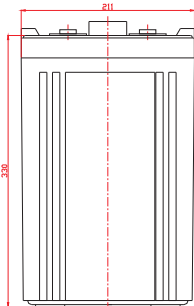
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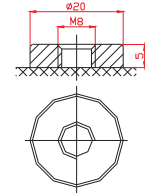
ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 211(L)×176(W)×366(H)



Terminal F10



Constant Current Discharge Characteristics : A(25°C)

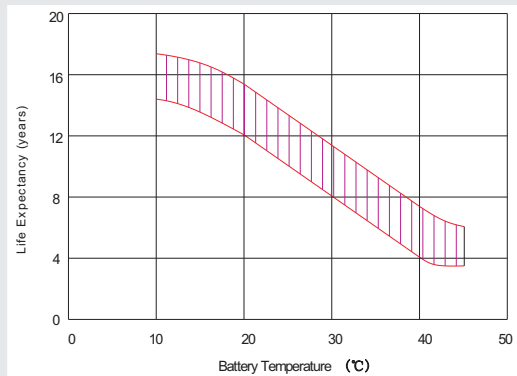
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	611.0	450.6	290.0	172.4	128.4	102.3	86.18	72.38	58.43	48.84
1.65V	581.0	432.6	277.4	166.1	123.0	98.75	82.59	70.64	55.81	47.99
1.70V	541.7	407.8	272.0	163.4	120.3	97.85	81.70	68.90	54.94	47.12
1.75V	480.9	367.0	250.5	154.4	114.0	92.47	78.10	65.41	53.20	46.25
1.80V	414.0	334.3	236.1	147.2	109.5	91.57	75.41	64.54	52.33	45.38
1.85V	350.1	301.0	218.2	139.2	104.1	84.39	71.82	61.05	49.71	42.31

Constant Power Discharge Characteristics : W(25°C)

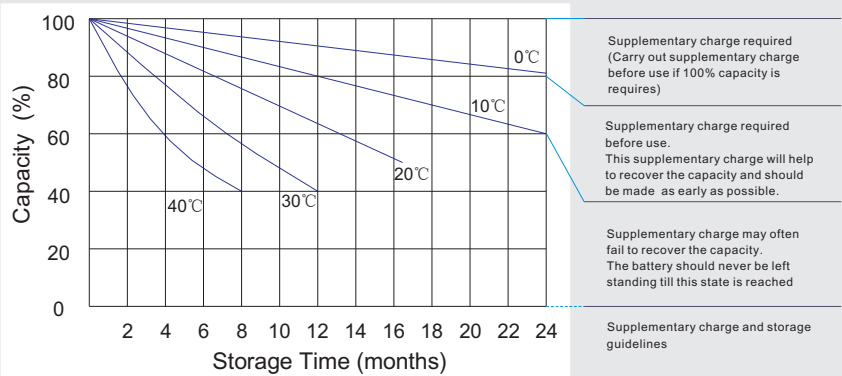
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1070	821.2	531.0	319.3	239.3	192.3	162.9	139.7	111.2	94.29
1.65V	1042	816.8	529.1	314.7	234.5	189.5	161.0	137.9	110.2	93.40
1.70V	984.0	773.0	519.5	310.1	231.0	188.7	159.6	134.7	108.6	91.94
1.75V	876.5	696.6	478.5	293.5	222.7	179.3	152.9	128.0	105.1	90.48
1.80V	758.6	635.6	451.2	280.3	213.5	178.4	147.9	126.5	103.4	87.25
1.85V	646.9	573.0	417.1	265.4	203.4	165.3	141.2	119.9	98.29	84.01

All mentioned values are average values.

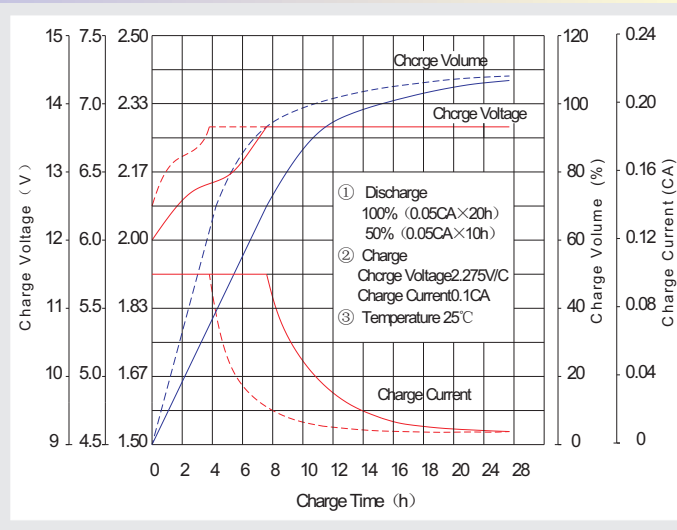
Effect of temperature on long term float life



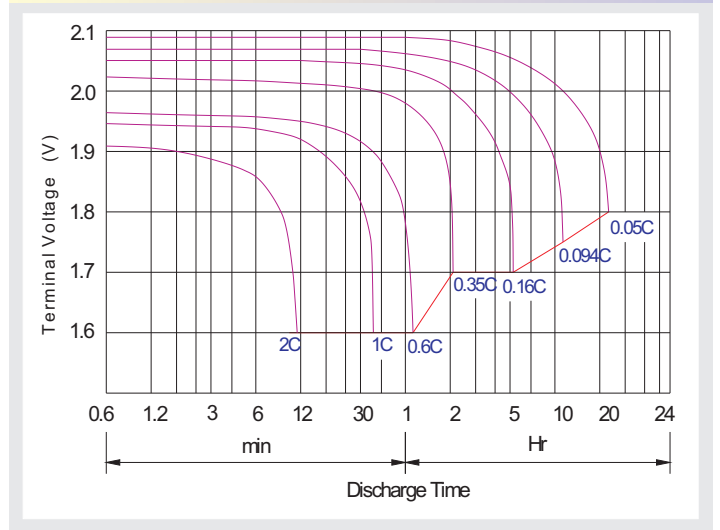
Storage characteristic



Charge characteristic Curve for standby use



Discharge characteristic Curve



Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

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

Maintenance & Cautions

Float Service:
※ Every month, recommend inspection every battery voltage.
※ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 100% rate capacity discharge.
Charge: Max. current 0.3CA, constant voltage 2.4-2.45V/Cell charge 24h.
※ Effect of temperature on float charge voltage: -3mV/°C/Cell.
※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h+2.40~2.45V,24h,Max. Current 0.2CA
Constant Current	-0.2Cx2h+0.1CA×12h
Fast	-0.2Cx2h+0.3CAx4.0h