



RL23000D (2V3000Ah)

RL23000D is AGM Deep cycle battery with 18 years floating design life, specially designed for frequent cyclic discharge usage. By using strong grid and specific paste plate, it makes battery have 30% more cyclic life time than standby series. It is applicable for solar energy system, golf cart, electric wheelchair, etc..



Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	3000Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 193.0 Kg
Max. Discharge Current	9000 A (5 sec)
Internal Resistance	Approx. 0.3 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	600 A
Equalization and Cycle Service	2.43 to 2.47 VDC/unit Average at 25°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) 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



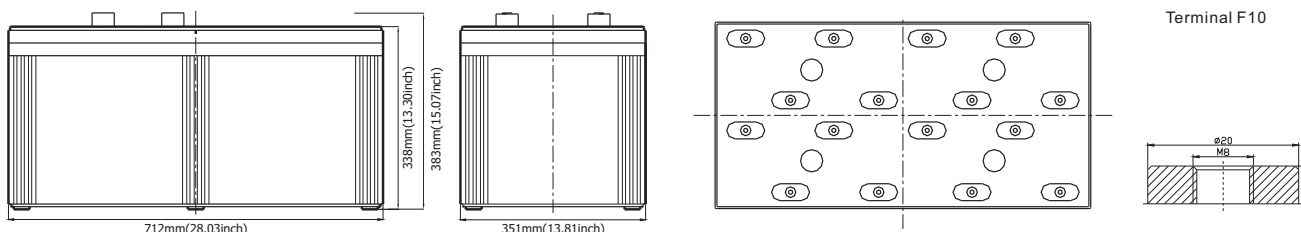
G4M20206-0910-E-16



ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 712(L)×351(W)×338(H)



Constant Current Discharge Characteristics : A(25°C)

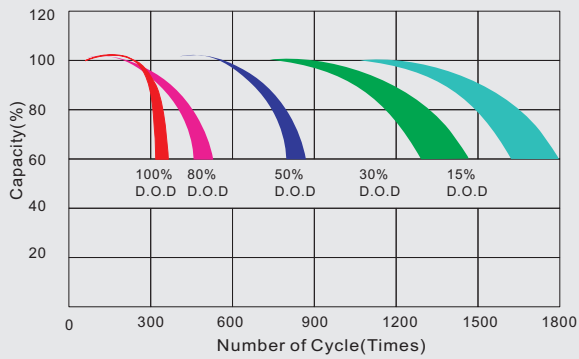
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	4073	3004	1933	1149	855.9	682.3	574.6	482.6	389.5	325.6
1.65V	3873	2884	1849	1107	819.9	658.4	550.6	470.9	372.1	320.0
1.70V	3612	2719	1813	1089	802.0	652.4	544.6	459.3	366.3	314.1
1.75V	3206	2447	1670	1029	760.1	616.5	520.7	436.1	354.7	308.3
1.80V	2760	2229	1574	981.5	730.2	610.5	502.7	430.2	348.8	302.5
1.85V	2334	2006	1454	927.7	694.3	562.6	478.8	407.0	331.4	282.1

Constant Power Discharge Characteristics : W(25°C)

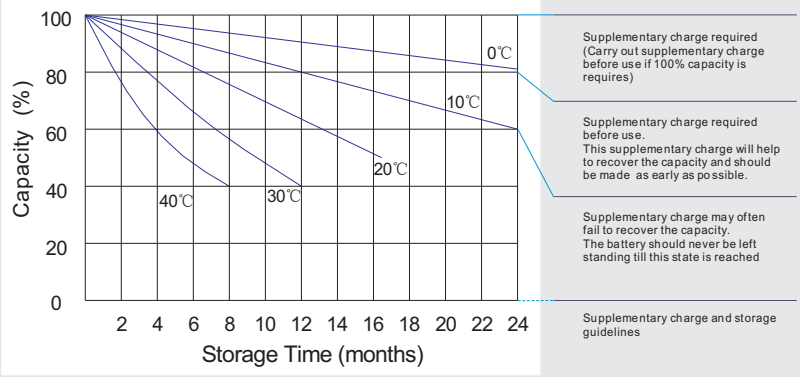
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	7131	5474	3540	2129	1595	1282	1086	931.1	741.3	628.6
1.65V	6944	5445	3527	2098	1564	1263	1074	919.2	735.0	622.7
1.70V	6560	5153	3463	2067	1540	1258	1064	897.8	723.7	613.0
1.75V	5843	4644	3190	1957	1485	1195	1019.4	853.6	700.9	603.2
1.80V	5057	4237	3008	1869	1423	1190	986.3	843.5	689.6	581.7
1.85V	4313	3820	2781	1769	1356	1102	941.2	799.1	655.3	560.1

All mentioned values are average values.

Life characteristics of cyclic use



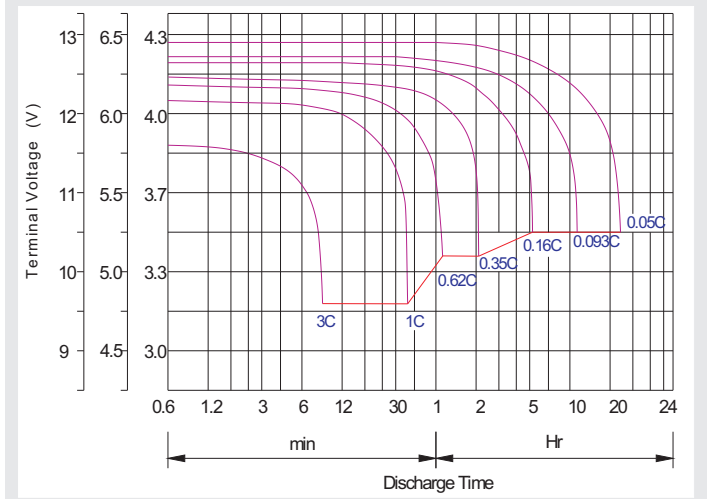
Storage characteristic



Charge characteristic curve for cyclic 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

Cycle service
※ Avoid battery over discharge, especially battery series connection use.
※ Charged with recommend voltage, ensure battery can be full recharged.
In general, recharge capacity should be 1.1-1.15 times discharge capacity.
※ Effect of temperature on cycle charge voltage: -4mV/°C/Cell.
※ There are a number of factors that will affect the length of cyclic service.
The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.
Generally speaking, the most important factors is depth of discharge.

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

Charging Method:

Constant Voltage	-0.2Cx2h+2.4~2.45V/Cellx24h, Max. Current 0.3CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h