

# RL2650D (2V650Ah)

RL2650D 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	650Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 40.0 Kg
Max. Discharge Current	3250 A (5 sec)
Internal Resistance	Approx. 0.6 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	130 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



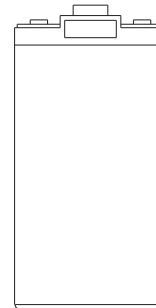
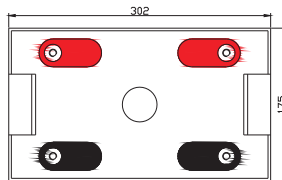
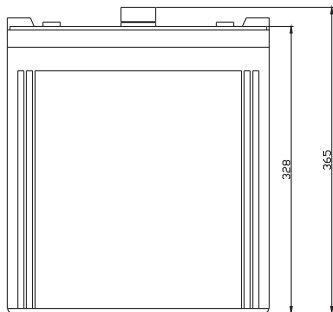
G4M20206-0910-E-16



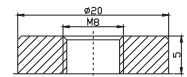
ISO9001:2000 Certificate

## Dimensions

Unit: mm Dimension: 302(L)×175(W)×328(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	882.5	650.8	418.9	249.0	185.4	147.8	124.5	104.6	84.40	70.54
1.65V	839.2	624.9	400.7	239.9	177.7	142.6	119.3	102.0	80.62	69.32
1.70V	782.5	589.1	392.9	236.0	173.8	141.3	118.0	99.52	79.36	68.06
1.75V	694.7	530.1	361.8	223.0	164.7	133.6	112.8	94.48	76.84	66.80
1.80V	598.0	482.9	341.0	212.7	158.2	132.3	108.9	93.22	75.58	65.54
1.85V	505.7	434.7	315.1	201.0	150.4	121.9	103.7	88.18	71.80	61.12

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

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1545	1186	766.9	461.2	345.6	277.8	235.3	201.7	160.6	136.2
1.65V	1505	1180	764.3	454.6	338.8	273.7	232.6	199.2	159.2	134.9
1.70V	1421	1117	750.3	447.9	333.6	272.6	230.6	194.5	156.8	132.8
1.75V	1266	1006	691.2	424.0	321.7	258.9	220.9	185.0	151.9	130.7
1.80V	1096	918.0	651.8	404.9	308.4	257.7	213.7	182.8	149.4	126.0
1.85V	934	827.7	602.4	383.3	293.7	238.7	203.9	173.1	142.0	121.3

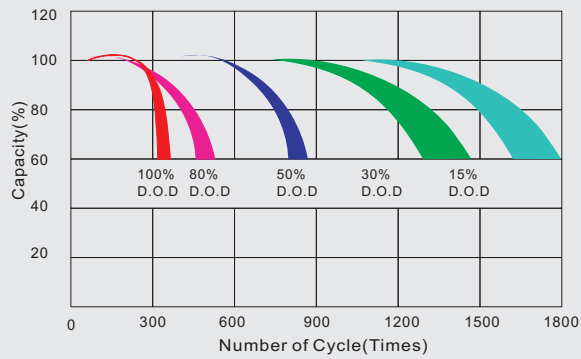
All mentioned values are average values.

# RL2650D

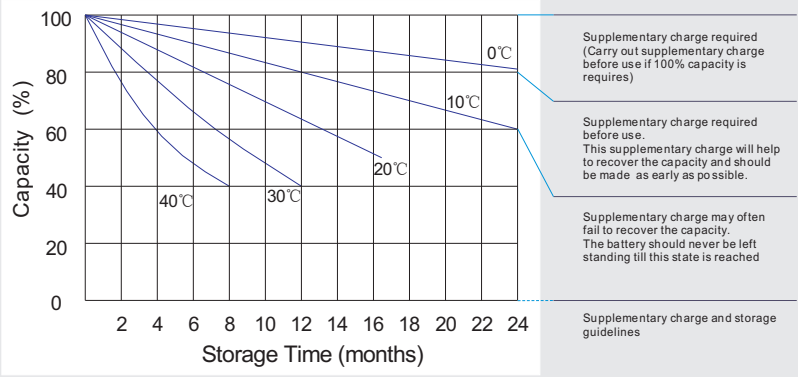
2V650Ah



## Life characteristics of cyclic use



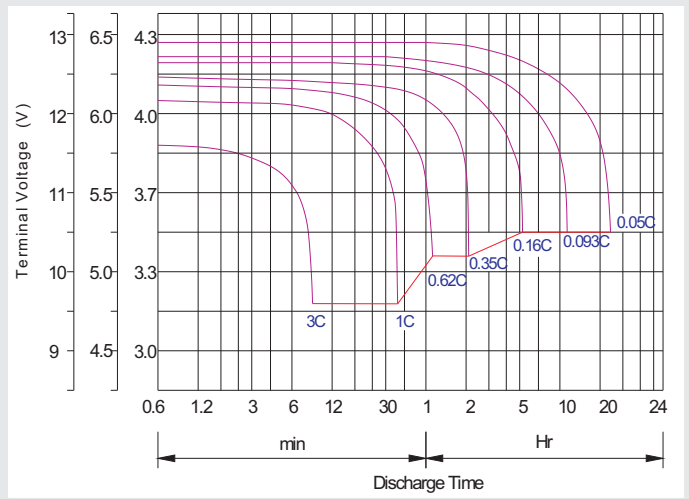
## Storage characteristic



## 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