



RA12-65DG (12V65Ah)

RA12-65DG is GEL Deep cycle battery, with 12 years floating design life, superiorly designed for frequent cyclic discharge applications under extreme temperature. By using strong grid to insure reliable performance under frequent cyclic discharge use. 400 cycles could be available at 100% DOD. Offering extra-durable cyclic performance, high efficiency of recovery, that is more suitable for solar, mobility, E-toll, marine, deep discharge UPS etc..



Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	65Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 21.0 Kg
Max. Discharge Current	650 A (5 sec)
Internal Resistance	Approx. 8.0 mΩ
Operating Temperature Range	Discharge: -40°C~60°C Charge:-20°C~50°C Storage: -40°C~60°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.6to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	13A
Equalization and Cycle Service	14.2 to 14.4VDC/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	Terminal F5/F11
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



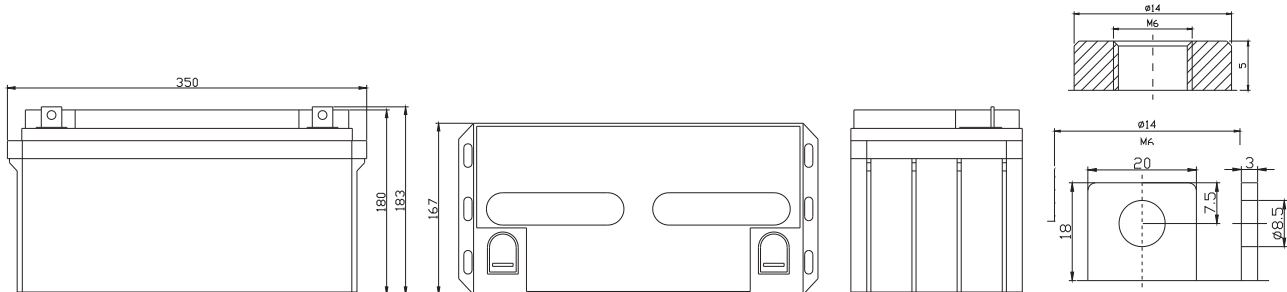
G4M20206-0910-E-16



ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 350(L)×167(W)×180(H)



Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	170.28	126.82	99.239	65.257	38.246	22.873	15.795	13.084	11.015	7.5244	6.2410	3.3301
10.0V	165.36	120.67	97.203	64.179	38.070	22.701	15.734	13.023	10.951	7.4632	6.1810	3.2695
10.2V	160.46	116.41	95.677	63.611	37.717	22.529	15.613	12.963	10.886	7.4021	6.1210	3.2090
10.5V	145.78	108.70	92.168	63.747	37.364	22.357	15.553	12.841	10.756	7.3409	6.0610	3.1484
10.8V	133.11	100.28	85.947	63.262	36.481	21.955	15.129	12.539	10.562	7.2185	6.0009	3.0879
11.1V	114.96	90.667	77.978	59.794	34.657	20.981	14.463	11.933	10.108	6.9127	5.8209	2.9063

Constant Power Discharge Characteristics: W (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	1796.5	1350.6	1081.9	732.25	441.96	269.59	187.96	155.96	131.41	89.841	74.580	39.928
10.0V	1761.1	1309.3	1064.5	723.86	440.90	268.16	188.02	155.76	131.08	89.410	74.110	39.234
10.2V	1741.0	1274.7	1052.5	725.79	437.49	266.55	187.20	155.42	130.63	88.825	73.452	38.508
10.5V	1603.6	1201.1	1015.7	727.80	433.56	264.61	186.48	153.97	129.07	88.091	72.731	37.781
10.8V	1477.5	1120.2	949.75	723.07	425.56	261.24	181.40	150.46	126.74	86.622	72.011	37.055
11.1V	1312.7	1024.5	864.78	687.51	407.34	251.53	173.56	143.19	121.30	82.952	69.851	34.875

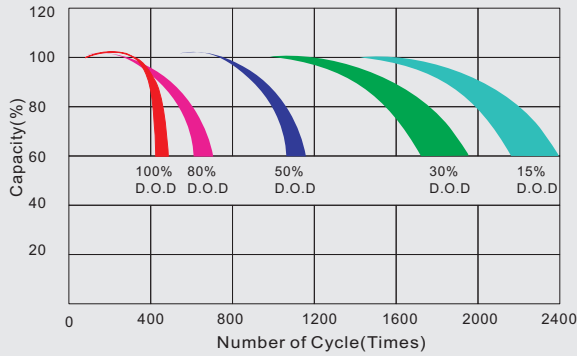
All mentioned values are average values.

RA12-65DG

12V65Ah



Life characteristics of cyclic use



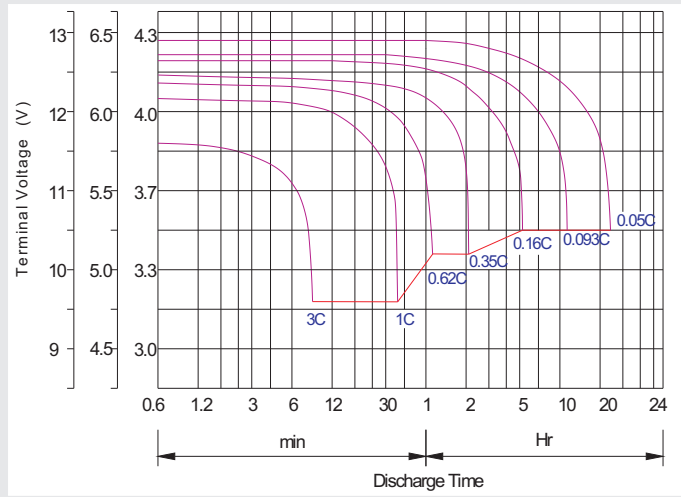
Storage characteristic



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