CLEANTECH GULF

6-235 (6V235Ah)

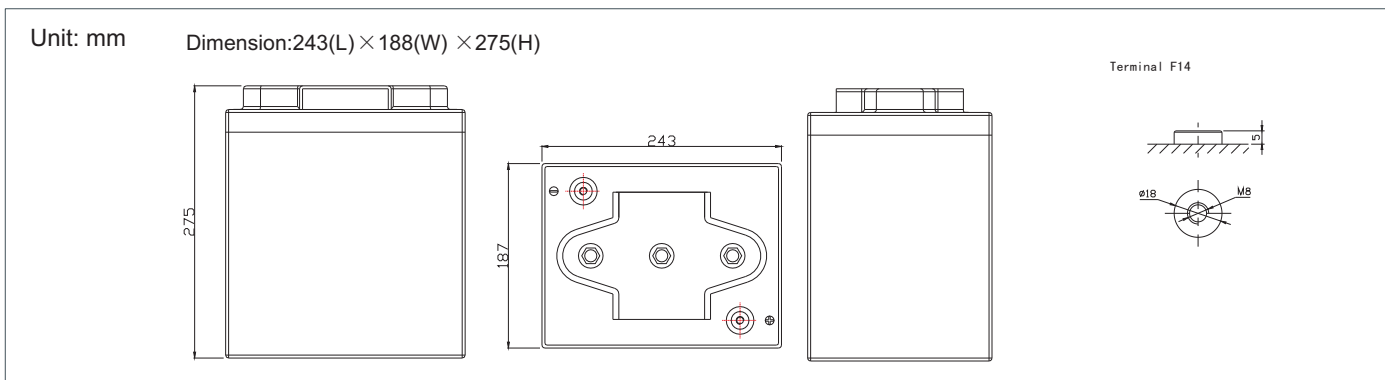6 Volts series is AGM battery with 12 years floating design life , it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented electrolyte, the 6V series offers excellent recovery after deep discharge under frequent cyclic discharge use, and can deliver 400 cycles at 100% DOD. Suitable for solar, CATV, marine , RV and deep discharge UPS, communication , and telecommunication , etc.

Specification

Cells Per Unit	3
Voltage Per Unit	6
Capacity	235Ah@20hr-rate to 1.75V per cell @25℃
Weight	Approx. 34.5Kg (Tolerance±2%)
Max. Discharge Current	2250 A (5 sec)
Internal Resistance	Approx. 4 mΩ
Operating Temperature Range	Discharge: -40℃~60℃ Charge:-20℃~50℃ Storage: -40℃~60℃
Normal Operating Temperature Range	25℃±5℃
Float charging Voltage	6.8 to 6.9 VDC/unit Average at 25℃
Recommended Maximum Charging Current	45 A
Equalization and Cycle Service	7.1 to 7.2 VDC/unit Average at 25℃
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using.
Terminal	Terminal F14
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Dimensions

Unit: mm

Dimension:243(L)×188(W) ×275(H)

Terminal F14

Constant Current Discharge Characteristics: A (25℃)(The capacity reaches the peak value after 5-20 cycles.)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
4.80V	535.9	383.5	307.9	206.3	131.2	78.98	57.13	45.61	38.72	26.23	21.78	11.94
5.00V	520.4	364.9	301.5	204.5	130.6	78.38	56.92	45.40	38.50	26.02	21.57	11.72
5.10V	505.0	352.0	296.8	203.2	129.4	77.79	56.48	45.18	38.27	25.80	21.36	11.50
5.25V	458.8	328.7	285.9	200.1	128.2	77.20	56.26	44.76	37.81	25.59	21.15	11.25
5.40V	418.9	303.3	266.6	193.2	123.8	75.81	54.73	43.71	36.89	24.57	20.48	10.68
5.55V	361.8	274.2	241.9	182.7	117.6	72.44	52.32	41.60	35.30	23.53	19.87	10.05

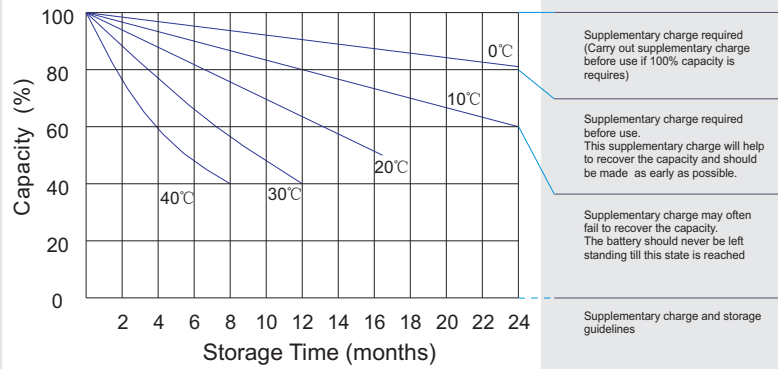## Constant Power Discharge Characteristics: W (25℃)(The capacity reaches the peak value after 5-20 cycles.)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
4.80V	2771	2042	1693	1176	757.9	465.4	340.8	271.8	231.0	156.6	130.1	71.56
5.00V	2717	1980	1666	1172	756.1	463.0	340.1	271.5	230.4	155.8	129.3	70.32
5.10V	2686	1927	1647	1166	750.3	460.2	338.6	270.9	229.6	154.8	128.1	69.01
5.25V	2474	1816	1590	1150	743.5	456.8	337.3	268.4	226.9	153.5	126.9	67.71
5.40V	2279	1694	1486	1113	722.1	451.0	328.1	262.2	221.3	147.4	122.9	64.09
5.55V	2025	1549	1353	1055	691.2	434.3	313.9	249.6	211.8	141.2	119.2	60.32

All mentioned values are average values (Tolerance ±2%) .

6-235 (6V235Ah)

Life characteristics of cyclic use

Storage characteristic

Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)

Supplementary charge required before use.
This supplementary charge will help to recover the capacity and should be made as early as possible.

Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

Charge characteristic curve for cyclic use

① Discharge
100%(0.05CA×20h)
50%(0.05CA×10h)
② Charge
Charge Voltage2.275V/C
Charge Current0.1CA
③ Temperature 25℃
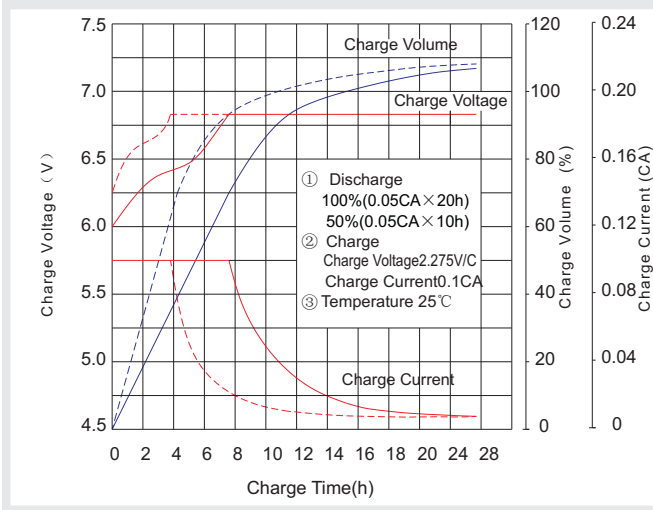
Discharge characteristic curve
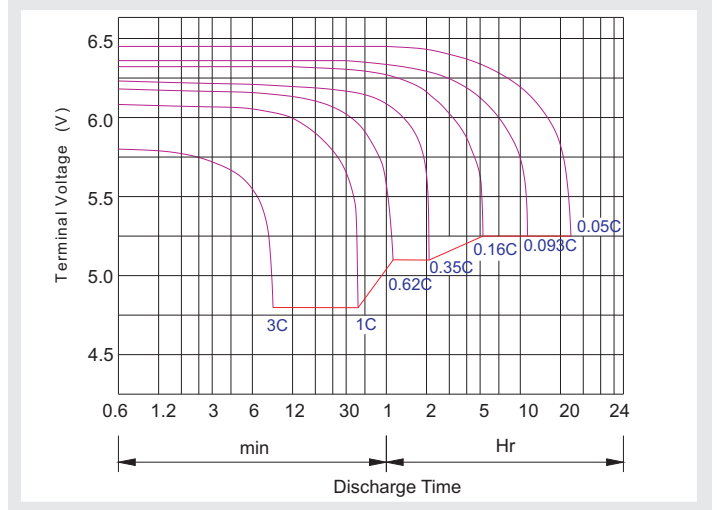
Capacity Factors With Different Temperature

Battery Type		-20℃	-10℃	0℃	5℃	10℃	20℃	25℃	30℃	40℃	45℃
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

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

Charging Method:

Constant Voltage	-0.2Cx2h+2.4-2.45V/cellx24h,Max. Current 0.2C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.2Cx6h

Bolt	M5	M6	M8
Terminal	F3 F4 F13 F18 T25 T26	F8 F11 F12-1 F15	F5 F9 F10 F12 F14 F16
Torque	6~7N-m	8~10N-m	10~12N-m

Maintenance & Cautions

Cycle service
※ Avoid battery over discharge, especially battery sereis 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/℃/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 specking, the most important factors is depth of discharge.

ISO9001