



# EV6-180 (6V180Ah)

EV (Electric Vehicle) series is specially designed for frequent deep cycle discharge. By using the specially designed active material and strong grids, the EV series battery offers reliable performance in high load situations and can deliver more than 300 cycles at 100% DOD. Suitable for mobility scooters, electric wheel chairs, golf buggies etc.



## Specification

Cells Per Unit	3
Voltage Per Unit	6
Capacity	180Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 28.0Kg( Tolerance $\pm 2\%$ )
Max. Discharge Current	1800A (5 sec)
Internal Resistance	Approx. 2.5 m $\Omega$
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C $\pm$ 5°C
Float charging Voltage	6.8 to 6.9 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	54 A
Equalization and Cycle Service	7.3 to 7.4 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	Terminal F12
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



MH28539



G4M20206-0910-E-16



CERTIFICATE

Postcode: 421001

is in conformity with

ISO 14001:2004 Standard



CERTIFICATE

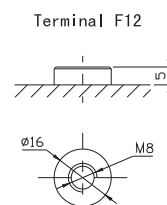
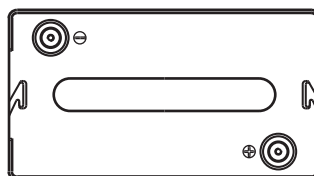
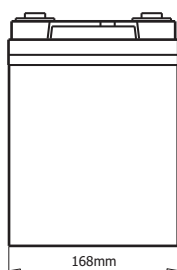
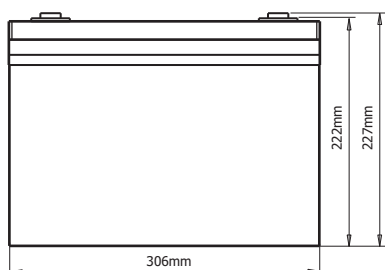
Postcode: 421001

is in conformity with

OHSAS 18001:1999 Standard

## Dimensions

Unit: mm Dimension: 306(L) × 168(W) × 227(H)



## Constant Current Discharge Characteristics: A (25°C)

F.V./Time	5 MIN	10 MIN	15 MIN	30 MIN	1 HR	2 HR	3 HR	4 HR	5 HR	8 HR	10 HR	20 HR
4.80 V	643.5	473.8	349.6	204.6	117.0	71.37	48.14	40.02	31.90	23.02	18.73	9.916
5.00 V	624.9	450.8	342.4	201.1	114.7	70.83	47.77	39.84	31.70	22.83	18.55	9.731
5.10 V	606.4	434.9	337.1	197.4	111.8	70.30	46.87	39.65	31.50	22.64	18.36	9.546
5.25 V	544.5	401.3	320.9	195.9	109.4	69.76	45.78	39.28	31.10	22.46	18.18	9.361
5.40 V	491.5	366.0	295.8	192.5	106.2	68.51	45.02	38.36	30.87	22.08	18.01	9.266
5.55 V	419.6	327.1	265.4	180.3	102.4	65.47	44.24	36.50	30.09	21.15	17.81	8.890

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

F.V./Time	5 MIN	10 MIN	15 MIN	30 MIN	1 HR	2 HR	3 HR	4 HR	5 HR	8 HR	10 HR	20 HR
4.80 V	3395	2548	1934	1171	676.0	423.6	286.2	238.5	191.0	137.4	112.4	61.07
5.00 V	3328	2470	1903	1157	674.4	422.2	285.0	238.2	189.6	136.7	111.6	60.01
5.10 V	3290	2405	1889	1147	669.2	419.7	280.6	237.7	189.0	135.9	110.7	58.90
5.25 V	2995	2239	1831	1152	656.0	418.4	274.4	235.5	187.2	134.7	109.6	57.78
5.40 V	2728	2064	1692	1133	637.4	412.1	271.1	230.1	185.2	132.5	108.5	56.67
5.55 V	2396	1884	1553	1068	615.0	394.4	266.5	219.0	180.9	126.9	107.1	55.05

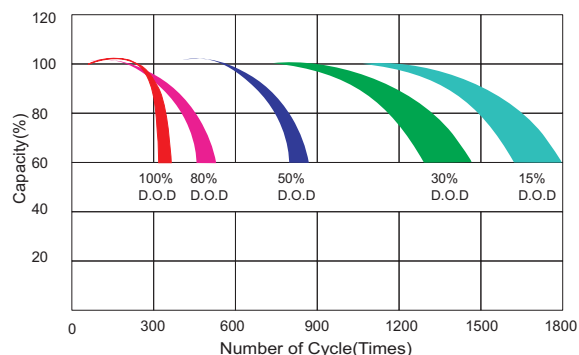
All mentioned values are average values (Tolerance  $\pm 2\%$ ).

# EV6-180

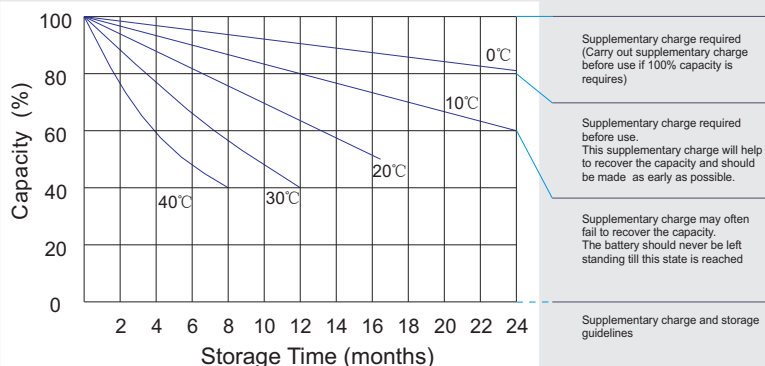
6V180Ah



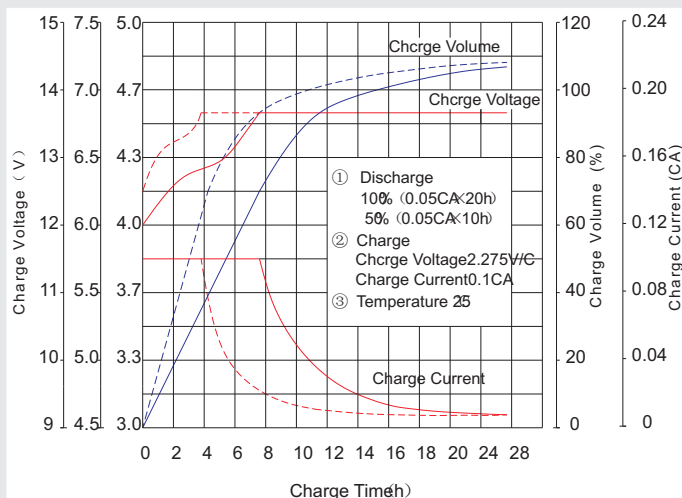
## Life characteristics of cyclic use



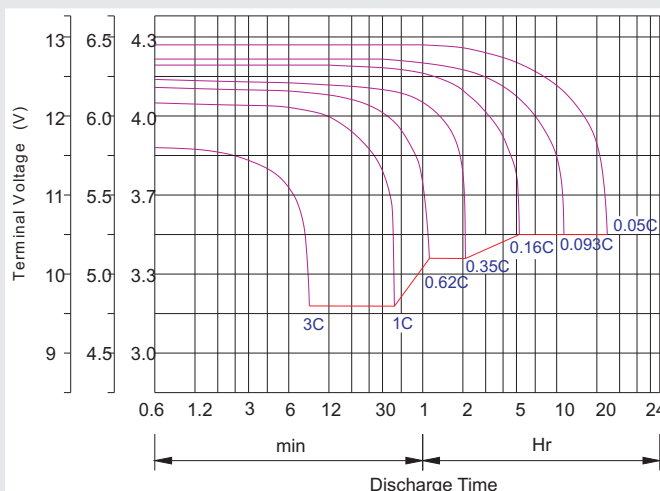
## Storage characteristic



## 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 C current V S. Discharge V oltag

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°C.

Charging Method:

Constant Voltage	-0.2Cx2h+2.4-2.45V/cellx24h, Max. Current 0.3C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.3Cx4h

## 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/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.

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2015 - Version 1