



# 6-EVF-90 (12V110Ah/10HR)

6EVF series battery is mainly used for power supply of electric tricycle, also for other DC power supply. The battery is mainly composed of positive plate, negative plate, separator, pole, battery case, vent plug and electrolyte. Each cell is connected through the partition welding. Each battery's voltage is 12V; the batteries of the same spec. are connected in series groups according to the prescribed amount. The battery is a good power battery, featuring large capacity, high energy ratio, good high current discharge performance, long service life, safety and reliability, maintainability.



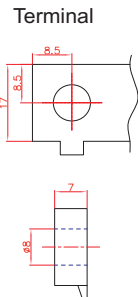
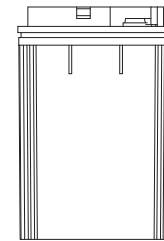
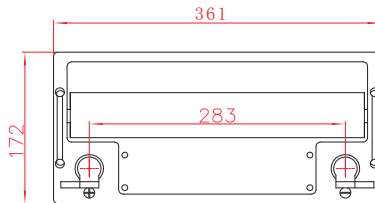
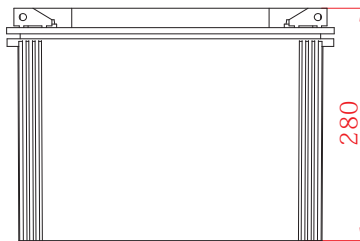
## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	90Ah@5hr-rate to 1.70V per cell @25°C 110Ah@10hr-rate to 1.80V per cell @25°C
Weight	Without Electrolyte 22.5 kg With Electrolyte 32.5 kg
Internal Resistance	Approx. 6.0 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	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current	18 A
Equalization and Cycle Service	15.3 to 15.9 VDC/unit Average at 25°C
Self Discharge	Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Container Material	PP



## Dimensions

Unit: mm Dimension: 361(L) × 172(W) × 280(H)



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

F.V/Time	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	20HR
9.60V	85.3	59.7	34.6	25.9	21.1	19.0	16.4	12.8	10.6	5.8
9.90V	83.3	58.3	33.8	25.3	20.6	18.5	16.1	12.5	10.3	5.7
10.2V	81.0	56.7	32.9	24.6	20.1	18.0	15.6	12.2	10.0	5.5
10.5V	77.9	54.5	31.6	23.7	19.3	17.3	15.0	11.7	9.6	5.2
10.8V	74.3	52.1	30.2	22.6	18.4	16.5	14.3	11.2	9.2	5.0
11.1V	70.4	49.3	28.6	21.4	17.5	15.7	13.6	10.6	8.7	4.6

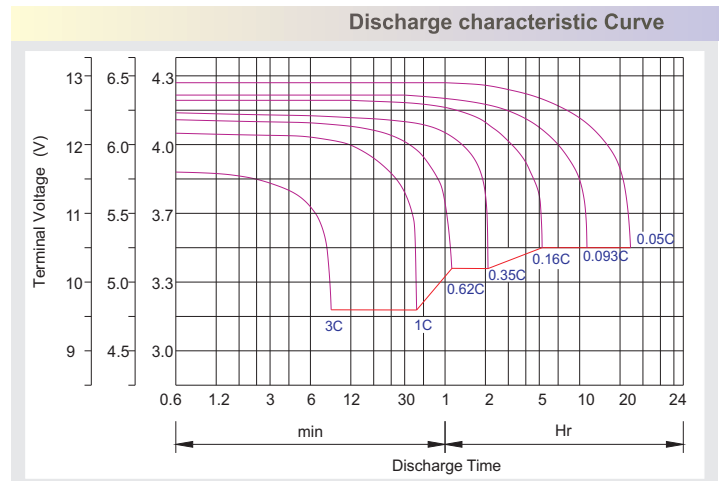
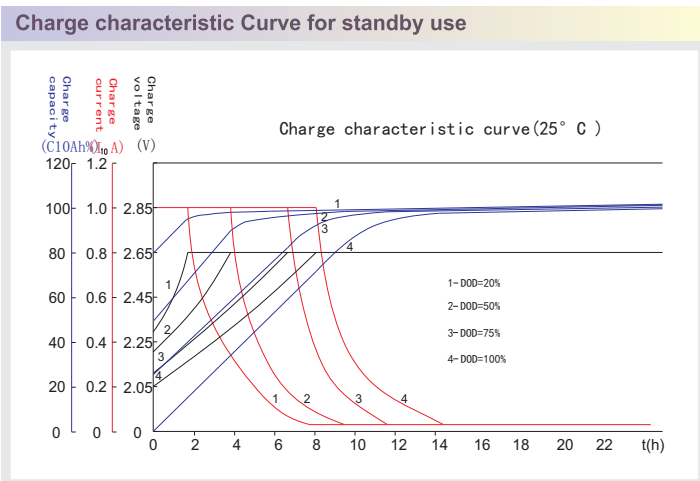
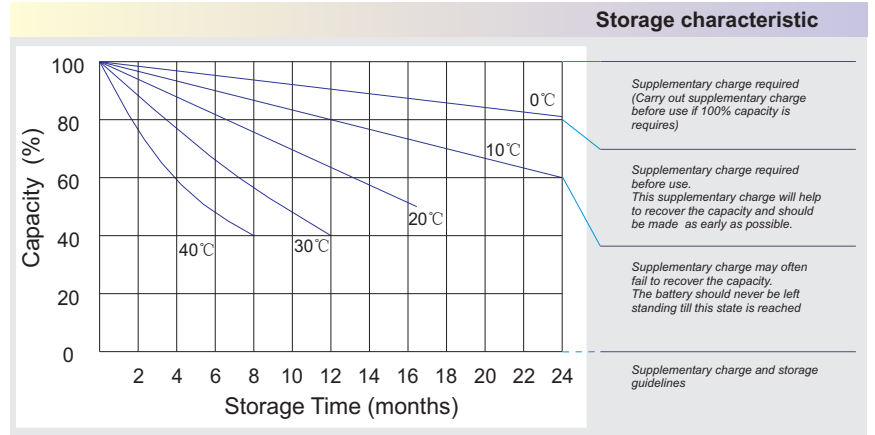
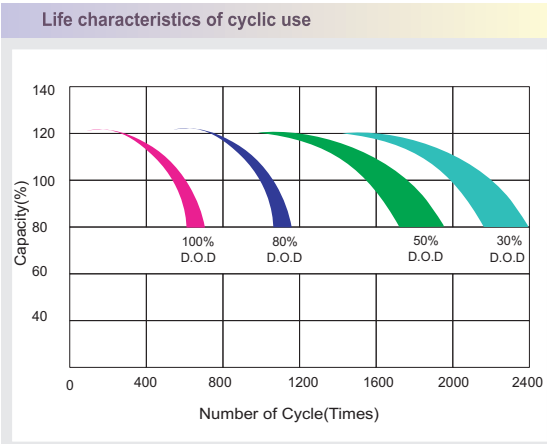
### Constant Power Discharge Characteristics: W(25°C)

F.V/Time	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	20HR
9.60V	956.7	689.8	407.7	308.2	251.9	226.1	196.0	152.7	126.3	70.2
9.90V	939.6	675.6	399.2	302.5	247.0	221.7	192.2	149.8	123.8	68.1
10.2V	923.8	657.7	388.7	294.9	240.6	216.0	187.2	145.8	120.4	65.6
10.5V	889.2	632.6	373.8	283.6	231.4	207.7	180.0	140.2	115.8	62.5
10.8V	849.8	607.4	358.9	270.8	221.2	198.3	171.9	133.9	110.6	59.7
11.1V	809.8	579.9	342.7	256.9	209.6	188.0	162.9	126.9	104.8	55.2

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

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## Discharge Current VS. Discharge Voltage

Final D ischarge 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(C=C<sub>s</sub>):

Constant Voltage	0.2Cx2h+2.65V/cellx12h, Max. Current 0.2C
Constant Current	0.14Cx6h+0.07Cx6h

## Maintenance & Cautions

<b>Cycle service</b>
※ 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 1.2-1.3 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 specking, the most important factors is depth of discharge.

For Battery Sales + EPA Battery Recycling and AC / DC Power Services, please contact:  
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