

### LF Series Battery

LF series batteries are superior long life design with thick plates, special grid alloy and unique electrolyte, Which can extend battery life and give extra power output for common power backup system. Battery floating service life can target 12 years e at 25 °C. Meet with IEC, BS,JIS and Eurobat standard,UL(MH62092),CE approved.

### Application

- \* Emergency Power System
- \* Communication equipment
- \* Telecommunication systems
- \* Uninterruptible power supplies
- \* Electric toy car and wheelchairs, etc.
- \* Power tools
- \* Alarm system
- \* Marine equipment
- \* Medical equipment
- \* Fire and Security System



### General Features

- \* Heavy Duty Grid
- \* Mechanized assembly
- \* Non-spillable construction
- \* High Reliability and Stability
- \* Sealed and Maintenance-free
- \* Long Life and low self-discharge design

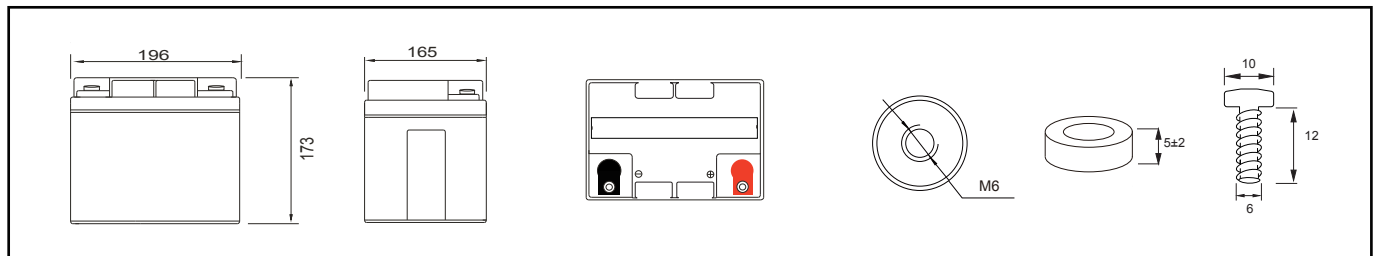
### Construction

- \* Positive ..... Lead dioxide
- \* Electrolyte ..... Sulfuric acid
- \* Separator ..... Fiber glass
- \* Container ..... ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)
- \* Negative ..... Lead
- \* Safety Valve ..... EPDR
- \* Terminal ..... Copper

### Specification

Battery Model	Nominal Voltage			12V
	Rated capacity (10 Hour rate)			40Ah
	Cells Per battery			6
Dimension	Length	Width	Height	Total Height
	196mm (7.71 inches)	165mm (6.49 inches)	173mm (6.81 inches)	173mm (6.81 inches)
Approx Weight	11.60kg(25.57lbs) ± 3%			
Capacity @ 25°C (77°F)	10 hour rate(3.9A,10.8V)	5 hour rate(7.1A,10.5V)	3 hour rate(10.3A,10.8V)	1 hour rate(24A,9.6V)
	39Ah	35.5Ah	30.9Ah	24Ah
Max.discharge current	400A (5 Sec.)			
Internal Resistance	Full charged at 25°C (77°F) : Approx 9.0mΩ			
Capacity affected by Temp.(10 HR)	40°C (104°F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)
	102%	100%	85%	65%
Self Discharge @25°C (77°F)	After 3 months storage		After 6 months storage	After 12 months storage
	91%		82%	64%
Charge method @25°C (77°F)	Cycle Use		Float Use	
	14.40-14.70V (Initial charging current less than 12A)		13.50-13.80V	

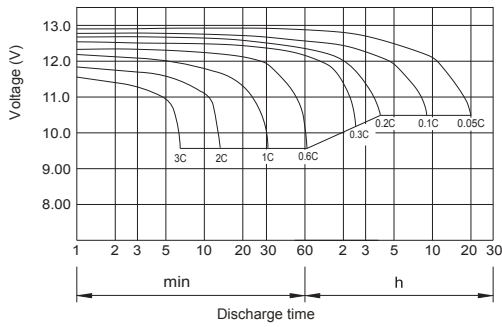
### Outer dimension (mm)



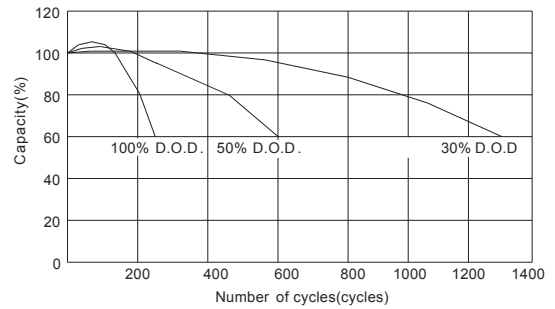
### Terminal Type (mm)

Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)												
F.V/time	5MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	128.200	96.644	73.100	47.500	24.000	17.565	14.807	10.548	7.198	5.097	4.151	2.308
	237.111	184.490	141.083	94.620	47.880	35.072	29.626	21.104	14.402	10.198	8.305	4.617
1.67V	113.813	90.188	69.303	46.485	23.826	17.391	14.733	10.492	7.158	5.054	4.086	2.192
	210.470	172.149	133.858	92.645	47.536	34.734	29.504	21.031	14.349	10.133	8.192	4.396
1.70V	107.739	86.961	67.594	46.079	23.652	17.374	14.696	10.466	7.157	5.003	4.034	2.134
	199.280	166.095	130.659	91.838	47.246	34.713	29.442	20.984	14.349	10.036	8.093	4.281
1.75V	97.509	81.834	64.746	45.267	23.304	17.148	14.604	10.400	7.119	4.989	4.000	2.100
	180.365	156.337	125.283	90.286	46.667	34.296	29.252	20.862	14.280	10.016	8.030	4.216
1.80V	87.118	76.328	62.088	44.252	23.130	17.026	14.512	10.345	7.099	4.946	3.935	2.031
	161.182	145.872	120.326	88.301	46.377	34.137	29.073	20.762	14.248	9.937	7.906	4.080
1.85V	76.728	70.822	58.860	43.034	22.783	16.835	14.383	10.252	7.059	4.882	3.871	1.962
	142.000	135.408	114.188	85.933	45.747	33.838	28.827	20.597	14.182	9.817	7.785	3.945

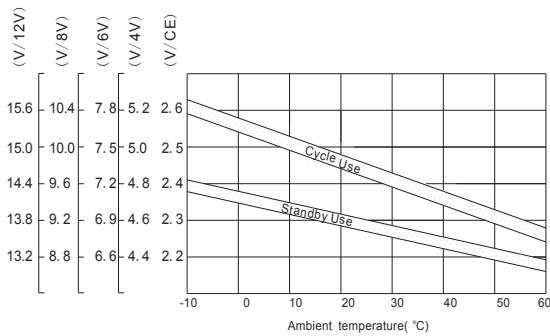
### Discharge characteristic Curve



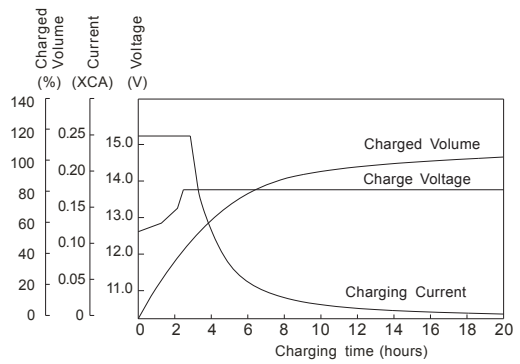
### Cycle service life in relation to depth of discharge



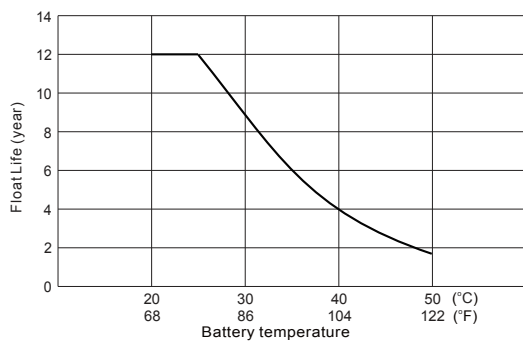
### Relationship between charging voltage and temperature



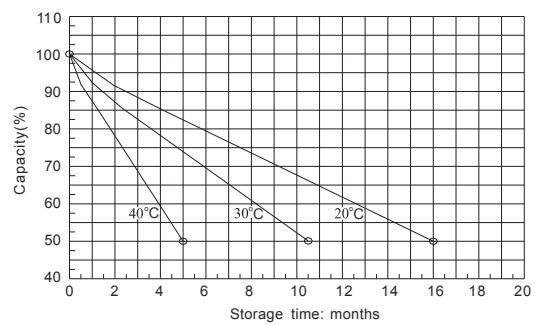
### Constant voltage charging characteristic (0.25CA, at 25°C)



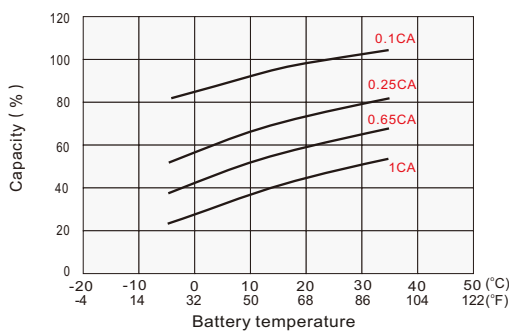
### Temperature effects on float life



### Self-discharge characteristic



### Temperature Effects in Relation to Battery Capacity



### Charge characteristic Curve for standby use

