

LC Range Lead Carbon Battery

NEXT GENERATION ENERGY STORAGE BATTERY

EverExceed®
power your applications

LC Range Lead-Carbon Battery



EverExceed LC series of lead-carbon batteries using the world's most latest and advanced lead-carbon technology, add unique high capacitance and highly conductive carbon materials into the negative electrode, making LC series battery combine the advantages of a lead acid battery and super capacitors. LC series battery provide not only high energy density, but also, fast charge, rapid discharge and longest deep cycle life performance. which is the best choice for solar and wind renewable energy storage systems and hybrid energy systems.

APPLICATION

- ◆ Solar energy storage system
- ◆ Wind energy storage system
- ◆ Smart power grids and micro-grids system
- ◆ Peak shifting of electrical power system
- ◆ Frequency regulation and load following service
- ◆ Distributed energy storage system
- ◆ Generator and battery hybrid energy system
- ◆ Telecommunications
- ◆ Power plant and substation
- ◆ Emergency lighting system
- ◆ UPS
- ◆ Data Center
- ◆ Navigation Aids

SPECIFICATIONS

- ◆ Positive Plate: Lead-Calcium-Tin flat plate grid
- ◆ Negative Plate: Lead carbon flat plate
- ◆ Electrolyte: Diluted Sulfuric Acid
- ◆ Container & Cover:
Standard: Reinforced ABS (UL 94HB) container and cover.
Optional: Flame-retardant reinforced ABS container and cover compliant with U.L.94 V-0 with an Oxygen limiting Index of greater than 28%.
- ◆ Separators: Absorptive Glass Mat Separator
- ◆ Float Voltage: 2.25 VPC +/- 1% at 20°C /25°C
- ◆ Cycle service: 2.35 VPC +/- 1% at 20°C /25°C
- ◆ Safety One-Way Valve: 2-3PSI self-resealing
- ◆ Terminals: Silver plated Copper Insert M8 terminal

FEATURES

- ◆ 20+ years design life;
- ◆ Unique super lead carbon technology, deep cycle battery design;
- ◆ Negative electrode with highly conductive carbon material, reduced sulfation of negative plate;
- ◆ Outstanding PSOC (partial state of charge) cycle performance;
- ◆ 5~8 times cycle life between 30 and 70 percent state-of-charge compared with normal VRLA, without fear of becoming sulfated;
- ◆ Superior deep cycle life by using EverExceed unique long-life technology and design, more than 1500 cycles @ 80% DOD @ 25°C ;
- ◆ Excellent recharge acceptance performance, recharge fast after deep discharge;
- ◆ Excellent quick charge performance, reduce charging time by 30%~50%;
- ◆ Optimized high-compression Absorbed Glass Mat materials significantly enhance performance and reliability, greater than 99% recombination efficiency;
- ◆ Wide operating temperature range: -40°C to +80°C;
- ◆ Horizontal installation position for less space, easy installation & maintenance;
- ◆ Low self-discharge rate <3%/month;
- ◆ Manufactured with 95% recycled materials and are fully recyclable at the end of service;
- ◆ Complies with IEC60896, IEC61427 standards;

No transport restrictions

- ◆ Surface transport. Classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189.
- ◆ Marine transport. Classified as non-hazardous material as per IMDG amendment 27.
- ◆ Air transport. Complies with IATA/ICAO, Special provi-



Standard and Compliance

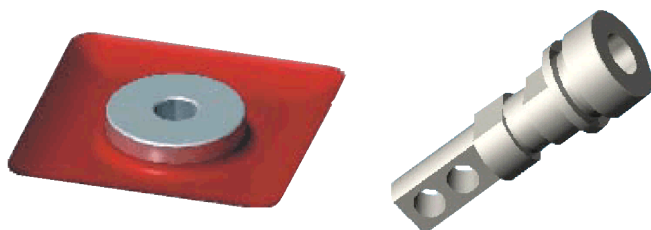
- ◆ IEC 60896-21/22: 2004
- ◆ IEC 61427-1: 2013
- ◆ IEC 61427-2: 2015
- ◆ DIN 43539-T5



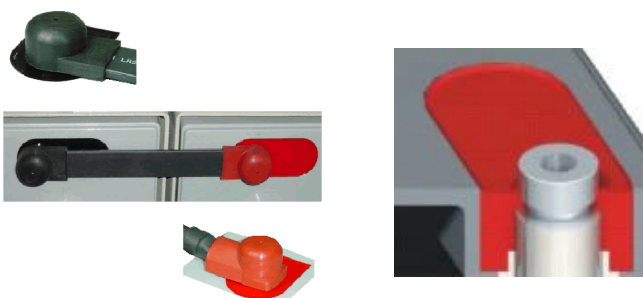
Lead Carbon Series Electrical Specifications & Dimensions

Model No.	Nominal Voltage	Nominal Cap. @10hr to 1.80VPC	Dimension								Weight		Terminal Type	No. of Terminal	Internal Resist mOhms	Max. Charge Current	Short Circuit Current
			Length		Width		Height		Total Height		kg	lbs					
			mm	inch	mm	inch	mm	inch	mm	inch							
LC 2-200	2	200	90	3.54	181	7.13	346	13.6	365	14.4	12.5	27.5	F-M8	2	0.60	40	1620
LC 2-300	2	300	124	4.88	181	7.13	346	13.6	365	14.4	17.5	38.5	F-M8	2	0.49	60	2410
LC 2-400	2	400	158	6.22	181	7.13	346	13.6	365	14.4	23.0	50.6	F-M8	2	0.39	80	3220
LC 2-500	2	500	191	7.52	181	7.13	346	13.6	365	14.4	28.0	61.6	F-M8	2	0.35	100	4100
LC 2-600	2	600	225	8.86	181	7.13	346	13.6	365	14.4	33.0	72.6	F-M8	2	0.31	120	4860
LC 2-800	2	800	303	11.9	181	7.13	346	13.6	365	14.4	45.0	99.0	F-M8	4	0.30	160	6400
LC 2-1000	2	1000	370	14.6	181	7.13	346	13.6	365	14.4	55.0	121	F-M8	4	0.27	200	7900
LC 2-1500	2	1500	551	21.7	181	7.13	369	14.5	388	15.3	85.5	188	F-M8	6	0.20	300	12375
LC 2-2000	2	2000	385	15.2	363	14.3	369	14.5	388	15.3	114	250	F-M8	8	0.18	400	16200
LC 2-3000	2	3000	568	22.4	363	14.3	369	14.5	388	15.3	172	378	F-M8	12	0.13	600	24200

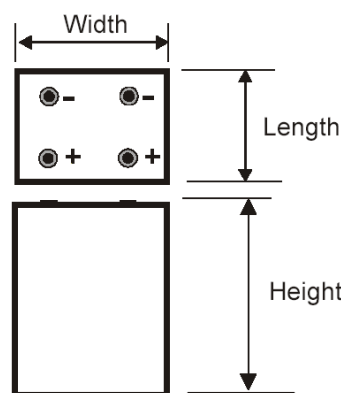
Terminal Type



F-M8: Copper Insert type terminal with 20 mm Diameter insert. Standing 5mm above the top of the battery case with M8 thread M8 bolt. Flat and Spring washer supplied.



Cell Dimensions for Rack Layout



Battery Float Voltage

Ambient Temperature	Recommended Applied Float Voltage VPC
0~9°C	2.33-2.35
10~14°C	2.30-2.33
15~19°C	2.27-2.30
20~24°C	2.27-2.30
25~29°C	2.25-2.27
30~34°C	2.23-2.25
35~40°C	2.21-2.23

Constant Current Discharge Characteristics

Battery Model	End VPC	Discharge Watts Data @ 25°C											
		Discharge Time In Minutes			Discharge Time In Hours								
		15	30	60	2	3	5	8	10	20	48	72	100
LC 2-200	1.8	424	334	234	125	100	67.3	47.4	39.4	23.0	9.90	6.25	4.73
	1.75	466	376	257	132	106	70.0	48.7	41.4	23.8	10.1	6.57	4.96
	1.67	489	390	263	137	109	71.9	50.8	42.0	24.2	10.3	6.67	5.04
LC 2-300	1.8	643	506	355	189	151	102	71.8	59.7	34.9	15.0	9.47	7.16
	1.75	706	570	390	201	160	106	73.8	62.7	36.0	15.3	9.95	7.52
	1.67	741	591	399	207	165	109	76.9	63.7	36.7	15.6	10.1	7.64
LC 2-400	1.8	858	675	473	252	201	137	95.1	79.9	46.1	19.7	12.7	9.58
	1.75	942	759	520	266	212	142	99.2	83.0	48.0	20.5	13.2	9.95
	1.67	989	788	532	277	221	146	102	85.0	48.9	20.8	13.5	10.2
LC 2-500	1.8	1071	843	590	316	252	171	119	100	57.6	24.6	15.9	12.0
	1.75	1176	948	650	334	266	177	123	104	60.0	25.5	16.5	12.5
	1.67	1234	983	664	345	275	182	127	106	61.1	26.0	16.8	12.7
LC 2-600	1.8	1235	976	694	375	299	205	143	120	69.1	29.5	19.1	14.4
	1.75	1356	1097	764	395	315	212	147	125	71.9	30.6	19.9	15.0
	1.67	1424	1138	782	409	326	218	153	127	73.3	31.2	20.2	15.3
LC 2-800	1.8	1670	1314	921	494	394	269	206	175	91.7	39.3	27.7	21.0
	1.75	1834	1478	1014	522	416	279	218	184	95.4	40.9	29.2	22.1
	1.67	1924	1532	1036	539	430	287	223	188	97.2	41.6	29.8	22.5
LC 2-1000	1.8	2087	1642	1150	618	493	336	258	218	115	49.2	34.6	26.2
	1.75	2293	1848	1267	652	520	348	273	230	119	51.1	36.5	27.6
	1.67	2406	1916	1295	675	538	359	279	235	121	52.0	37.3	28.2
LC 2-1500	1.8	2505	1971	1382	741	591	404	309	263	138	59.0	41.6	31.5
	1.75	2751	2217	1521	783	624	419	327	276	143	61.4	43.8	33.2
	1.67	2886	2298	1554	809	645	431	335	282	146	62.4	44.7	33.8
LC 2-2000	1.8	4174	3284	2301	1236	986	672	516	436	230	98.4	69.2	52.4
	1.75	4586	3695	2533	1304	1040	696	546	460	238	102	73.0	55.2
	1.67	4812	3833	2590	1349	1076	718	558	470	242	104	74.6	56.4
LC 2-3000	1.8	6261	4926	3451	1855	1479	1008	774	654	345	148	104	78.6
	1.75	6878	5543	3800	1956	1560	1044	819	690	357	153	110	82.8
	1.67	7217	5749	3885	2024	1614	1077	837	705	363	156	112	84.6

Actual Battery Discharge Data may be +/-5% of figures shown above.

Constant Current Discharge Characteristics

Battery Model	End VPC	Discharge Amps Data @ 25°C											
		Discharge Time In Minutes			Discharge Time In Hours								
		15	30	60	2	3	5	8	10	20	48	72	100
LC 2-200	1.8	198	146	98.6	61.8	49.3	35.1	24.8	20.7	11.1	4.73	3.28	2.48
	1.75	225	164	109	65.4	52.1	36.4	25.5	21.2	11.5	4.89	3.36	2.54
	1.67	247	174	117	67.4	53.7	37.2	26.0	21.8	11.7	4.98	3.45	2.61
LC 2-300	1.8	297	219	148	92.8	74.0	52.7	37.2	31.1	16.6	7.10	4.93	3.72
	1.75	338	246	164	98.2	78.3	54.6	38.3	31.9	17.2	7.34	5.05	3.82
	1.67	371	262	175	101	80.7	55.9	39.1	32.7	17.5	7.47	5.18	3.92
LC 2-400	1.8	397	292	198	124	98.8	70.3	49.7	41.4	22.2	9.56	6.56	4.96
	1.75	451	328	219	130	104	72.8	51.2	42.5	23.0	9.79	6.74	5.10
	1.67	496	350	234	135	108	74.6	52.2	43.5	23.4	10.0	6.90	5.22
LC 2-500	1.8	495	365	247	154	123	87.8	62.0	51.6	28.0	11.9	8.19	6.20
	1.75	563	409	273	163	130	90.9	63.9	53.0	28.7	12.2	8.42	6.37
	1.67	621	437	292	168	134	93.1	65.2	54.4	29.2	12.4	8.63	6.52
LC 2-600	1.8	571	422	290	183	146	105	74.4	61.9	33.2	14.4	9.82	7.43
	1.75	649	474	321	194	155	109	76.6	63.6	34.4	14.7	10.1	7.63
	1.67	715	505	343	201	160	112	78.2	65.3	35.1	14.9	10.4	7.83
LC 2-800	1.8	772	569	384	242	193	138	97.0	81.6	44.0	19.0	12.9	9.79
	1.75	878	638	425	256	204	143	101	84.8	45.7	19.6	13.5	10.2
	1.67	966	681	455	265	211	147	103	86.5	46.5	19.9	13.7	10.4
LC 2-1000	1.8	965	711	481	302	241	173	121	102	55.0	23.8	16.2	12.2
	1.75	1097	798	532	320	255	179	126	106	57.1	24.4	16.8	12.7
	1.67	1205	851	569	330	263	183	129	108	58.1	24.8	17.1	13.0
LC 2-1500	1.8	1483	1094	740	463	369	263	186	152	82.9	35.4	24.7	18.6
	1.75	1688	1229	819	490	391	273	191	155	85.9	36.7	25.2	19.1
	1.67	1853	1309	874	505	403	279	195	158	87.4	37.3	25.9	19.6
LC 2-2000	1.8	1930	1422	962	604	482	346	242	204	110	47.6	32.4	24.4
	1.75	2194	1596	1064	640	510	358	252	212	114	48.8	33.6	25.4
	1.67	2410	1702	1138	660	526	366	258	216	116	49.6	34.2	26.0
LC 2-3000	1.8	2895	2133	1443	907	723	519	363	306	165	71.4	48.6	36.6
	1.75	3291	2394	1596	959	765	537	378	318	171	73.2	50.4	38.1
	1.67	3615	2553	1707	989	789	549	387	324	174	74.4	51.3	39.0

Actual Battery Discharge Data may be +/-5% of figures shown above.

