Leadcrystal

Energy Evolved.

Lead Crystal Energy Solutions

Next-generation lead crystal battery systems for a sustainable future. High-performance, high-safety, and 99% recyclable.

LEAD CRYSTAL® BATTERIES

LEAD CRYSTAL® BATTERIES

POWERED BY
Betta Batteries

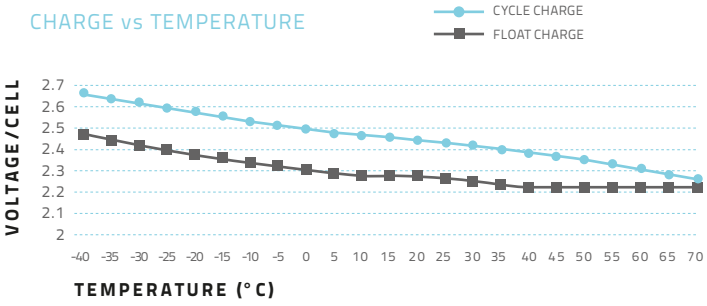
SPECIFICATION

Nominal Voltage		2V	
Rated Capacity (10 hour rate)		800 AH	
Dimension	Total Height (top of terminal)	335 mm	13.19"
	Height	330 mm	12.99"
	Length	410 mm	16.14"
	Width	175 mm	6.89"
Weight		Approximately 55 kg / 121.15 lbs	
Capacity 25°C	120 hour rate (8.0A)	960 AH	
	20 hour rate (44A)	880 AH	
	10 hour rate (80A)	800 AH	
Internal Resistance	Fully charged Battery (25°C)	0.2mΩ	
Self-Discharge 25°C	Capacity after 3 month storage	95%	
	Capacity after 6 month storage	85%	
	Capacity after 12 month storage	80%	
Max Discharge Current 25°C	6000A (5S)		
Terminal	Standard	F4	
	Optional		
Charging (Constant Voltage)	Cycle	Initial Charging Current 240A 2.45V/ (25°C)	
	Float	2.27V/ (25°C)	

DISCHARGE CURRENT AND END VOLTAGE

Discharge current (A)	End voltage (V)
0.05C or below or Intermittent discharge	1.9
0.05C of current close to it	1.85
0.1C of current close to it	1.8
0.2C of current close to it	1.75
From 0.2C to 0.5C	1.7
From 0.5C to 1C	1.6
From 1C to 3C	1.5
Current in excess of 3C	1.3

CHARGE vs TEMPERATURE



CHARGE vs TEMPERATURE CHART

temperature	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Cycle Charge	2.66	2.64	2.62	2.60	2.58	2.56	2.54	2.52	2.50	2.48	2.47	2.47	2.45	2.45	2.43	2.41	2.39	2.37	2.35	2.33	2.31	2.29	2.27
Float Charge (voltage/cell)	2.46	2.44	2.42	2.40	2.38	2.36	2.34	2.32	2.31	2.30	2.29	2.29	2.29	2.27	2.26	2.24	2.23	2.23	2.23	2.23	2.23	2.23	2.23

CONSTANT CURRENT DISCHARGE CHARACTERISTICS: UNITS AMPERES (25°C)

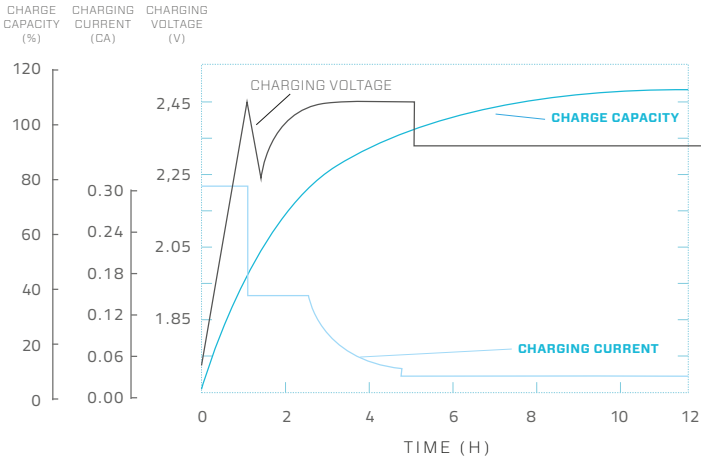
End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	2161.92	1379.2	908.8	684	559.2	333.6	242.4	188.4	160	137.6	104	84	70.8	44.24	37.07
1.67V	1860.77	1250.4	842.4	648	541.6	318.4	230.4	186.4	152	136	102.4	82.4	70.8	44.24	37.07
1.70V	1777.63	1212	816	640	523.2	313.6	225.6	184.8	151.2	135.2	101.6	81.6	70.8	44.16	36.96
1.75V	1615.97	1134.4	784	615.2	506.4	301.6	219.2	180	146.4	132	100	80.8	70.16	44.16	36.88
1.80V	1428.77	1039.2	754.4	592.8	484.8	291.2	216	176.8	143.2	128.8	97.6	80	68.64	44	36.72
1.83V	1247.23	949.6	696.8	550.93	458.4	278.4	208	169.6	136.8	124	94.4	77.6	66.8	43.84	35.68
1.85V	1066.37	860	640	509.6	432.8	266.4	200	163.2	131.2	120	91.2	75.44	64.88	43.76	34.64

DISCHARGE DATA WITH CONSTANT POWER UNITS: WATTS PER CELL (25°C)

End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	3584.77	2413.61	1651.99	1259.2	1043.2	636.8	464	360.79	307.2	269.6	204	166.27	139.2	86.4	72.48
1.67V	3202.37	2250.4	1546.4	1204.8	1016	616.96	452.8	359.2	297.6	266.4	199.96	162.4	139.2	86.4	72.48
1.70V	3099.11	2191.96	1504.01	1192	987.19	600.8	434.4	356.8	292	264.79	199.3	160.8	139.2	86.4	72.4
1.75V	2860.82	2060.78	1454.4	1155.21	960	580.83	424	351.2	284.8	260.8	195.2	159.18	139.2	86.4	72.32
1.80V	2593.59	1899.21	1404.78	1118.39	923.99	561.6	419.2	344.82	277.6	256.8	192	157.6	135.2	85.6	72.16
1.83V	2290.43	1758.37	1311.99	1048	877.6	540.8	404.8	333.6	268	249.6	185.61	153.6	132	85.6	70.32
1.85V	1987.2	1617.54	1219.19	977.6	832	519.99	390.4	321.6	257.6	242.4	179.2	149.6	128.8	84.8	68.56

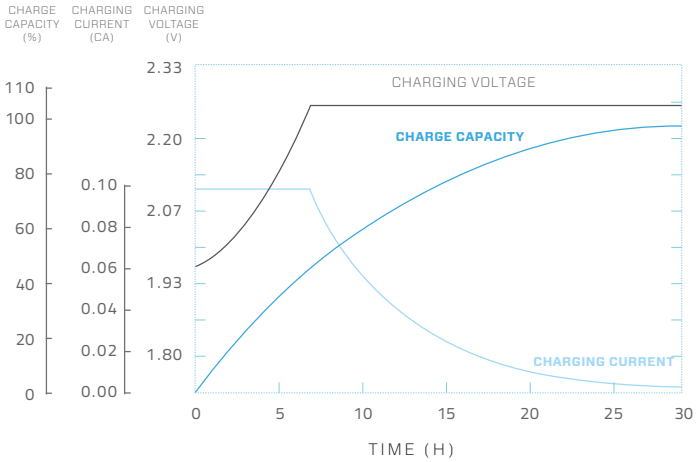
CYCLE CHARGE CHARACTERISTIC (25°C)

REGULAR CYCLE CHARGE CHARACTERISTICS 77°F (25°C)

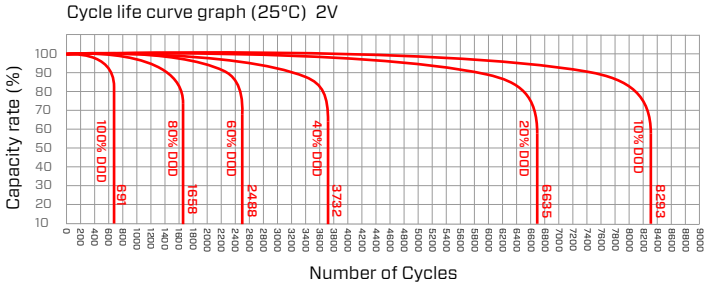


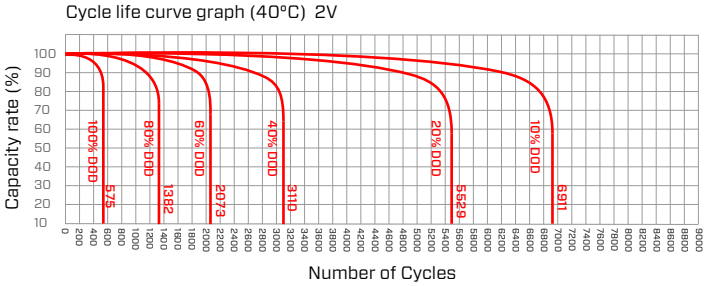
FLOATING CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

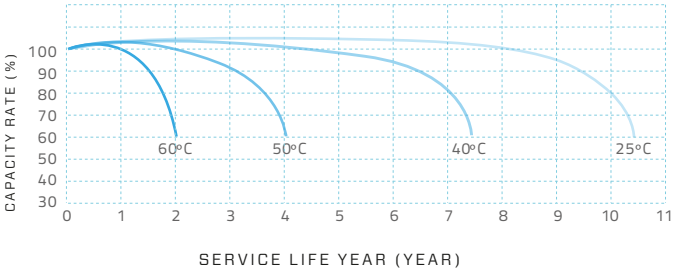


CYCLE LIFE CURVE GRAPH

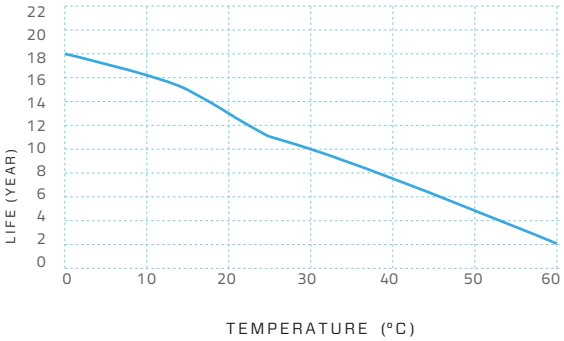




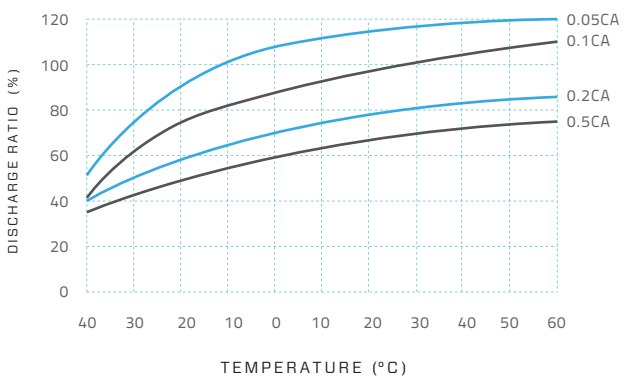
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



CNFJ-800 2V / 800 A

Leadcrystal

Energy Evolved.

Performance: Robust, resilient, high performing. Lead Crystal® batteries can be discharged deeper, cycled more often (also in extreme temperatures) and have a longer service life. They recover to full rated capacity over and over again.

Technology: A unique micro-porous high absorbent mat (AGM), high-purity lead calcium selenium plates, safe Si02 electrolyte solution that solidifies into a white crystalline powder when charged/discharged.

Cleaner & Safer: Less acid, no cadmium, no antimony. Lead Crystal® batteries are up to 99% recyclable and are classified as non-hazardous goods for transport.

Markets: Lead Crystal® batteries are being used in telecoms, UPS, petrochem/marine, defence, renewable energy, health care, manufacturing, transportation and electric motion (wheelchairs, golf carts & trolleys).

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