CNFJ-2200 2V/2200Ah

the power of tomorrow

CLEAN ENERGY DEFINES THE WORLD THAT WE LIVE IN TODAY AND TOMORROW. LEAD CRYSTAL® TECHNOLOGY CREATES POWER THAT IS CLEAN SAFE AND HIGH PERFORMING FOR A BETTER FUTURE

LEAD CRYSTAL® BATTERIES

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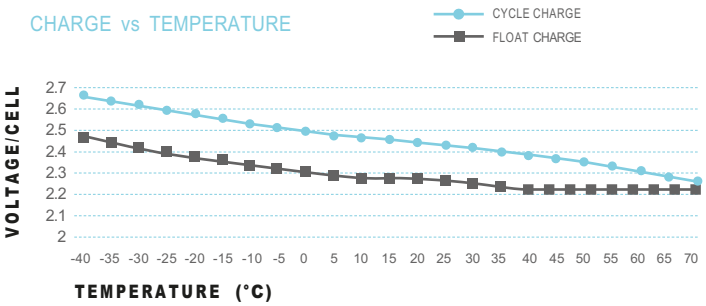
SPECIFICATION

Nominal Voltage		2V	
Rated Capacity (10 hour rate)		2200AH	
Dimension	Total Height (top of terminal)	347 mm	13.66"
	Height	343mm	13.50"
	Length	491 mm	19.33"
	Width	353 mm	13.9"
Weight		Approximately 130 kg / 286.60 lbs	
Capacity 25ºC	120 hour rate (20A)	2640 AH	
	20 hour rate (110A)	2420 AH	
	10 hour rate (200A)	2200 AH	
Internal Resistance	Fully charged Battery (25ºC)	0.08mO	
Self-Discharge 25ºC	Capacity after 3 month storage	95%	
	Capacity after 6 month storage	85%	
	Capacity after 12 month storage	80%	
Max Discharge Current 25ºC	20000A (5S)		
Terminal	Standard	F4	
	Optional		
Charging (Constant Voltage)	Cycle	Initial Charging Current 660A 2.45V/ (25ºC)	
	Float	2.27V/ (25ºC)	

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)

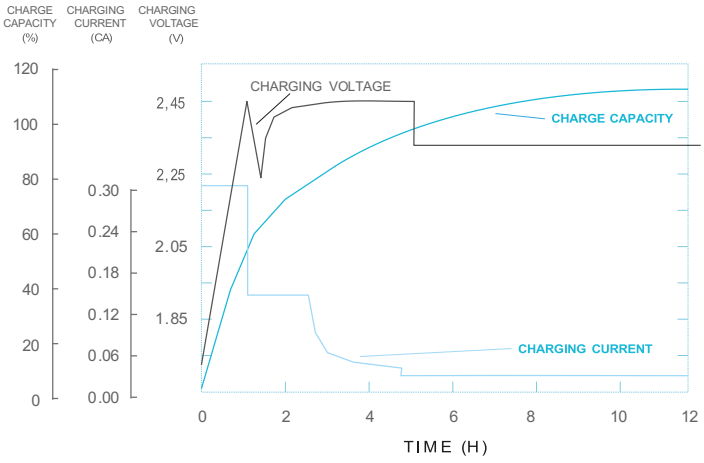
End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	5945.28	3792.8	2499.2	1881.00	1537.80	917.40	666.60	518.10	440.00	378.40	286.00	231.00	194.70	121.66	101.93
1.67V	5117.11	3438.6	2316.6	1782.00	1489.40	875.60	633.60	512.60	418.00	374.00	281.60	226.60	194.70	121.66	101.93
1.70V	4888.49	3333.0	2244.0	1760.00	1438.80	862.40	620.40	508.20	415.80	371.80	279.40	224.40	194.70	121.44	101.64
1.75V	4443.91	3119.6	2156.0	1691.80	1392.60	829.40	602.80	495.00	402.60	363.00	275.00	222.20	192.94	121.44	101.42
1.80V	3929.11	2857.8	2074.6	1630.20	1333.20	800.80	594.00	486.20	393.80	354.20	268.40	220.00	188.76	121.00	100.98
1.83V	3429.89	2611.4	1916.2	1515.07	1260.60	765.60	572.00	466.40	376.20	341.00	259.60	213.40	183.70	120.56	98.12
1.85V	2932.51	2365.0	1760.0	1401.40	1190.20	732.60	550.00	448.80	360.80	330.00	250.80	207.46	178.42	120.34	95.26

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	9858.12	6637.43	4542.99	3462.81	2868.80	1751.20	1276.0	992.16	844.80	741.40	561.00	457.24	382.80	237.60	199.32
1.67V	8806.51	6188.61	4252.61	3313.20	2794.00	1696.63	1245.2	987.79	818.40	732.60	549.89	446.60	382.80	237.60	199.32
1.70V	8522.55	6027.90	4136.02	3278.01	2714.77	1652.21	1194.59	981.20	802.99	728.18	548.09	442.20	382.80	237.60	199.10
1.75V	7867.25	5667.14	3999.59	3176.82	2640.01	1597.30	1166.0	965.80	783.20	717.20	536.80	437.73	382.80	237.60	198.88
1.80V	7132.38	5222.82	3863.15	3075.58	2540.98	1544.40	1152.8	948.25	763.40	706.20	528.00	433.40	371.80	235.40	198.44
1.83V	6298.69	4835.53	3607.97	2881.99	2413.39	1487.19	1113.2	917.40	737.00	686.40	510.42	422.39	363.00	235.40	193.38
1.85V	5464.79	4448.24	3352.78	2688.41	2288.01	1429.98	1073.6	884.40	708.40	666.60	492.80	411.40	354.20	233.20	188.54

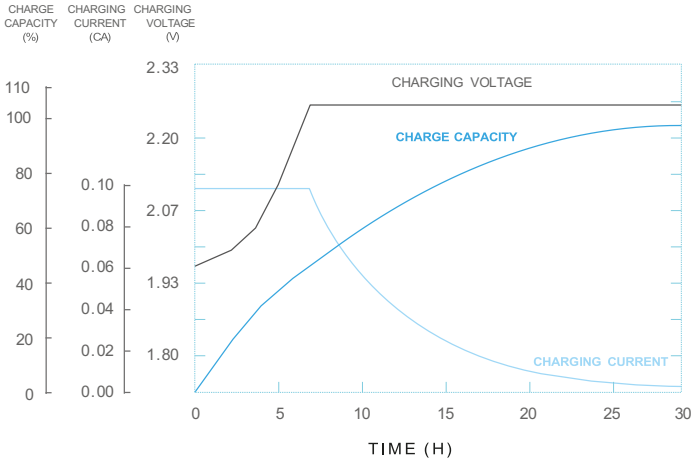
CYCLE CHARGE CHARACTERISTIC (25°C)

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

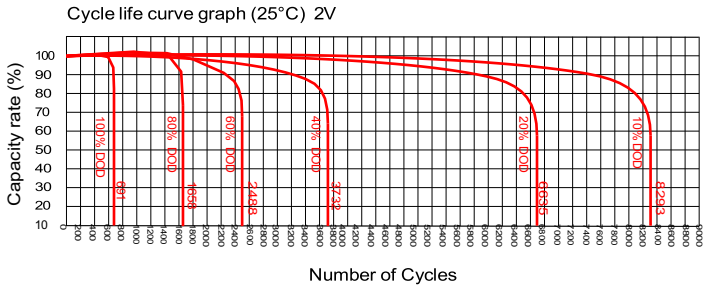


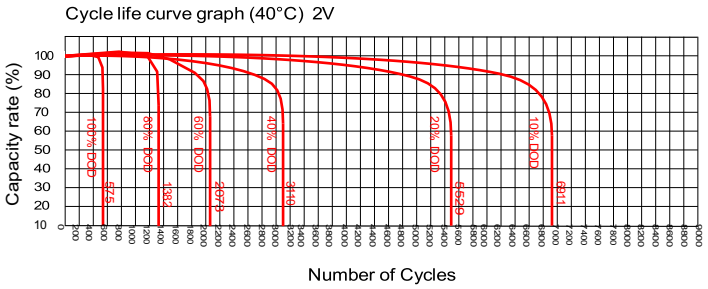
FLOATING CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

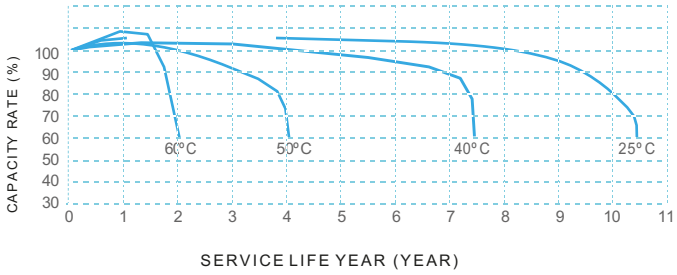


CYCLE LIFE CURVE GRAPH

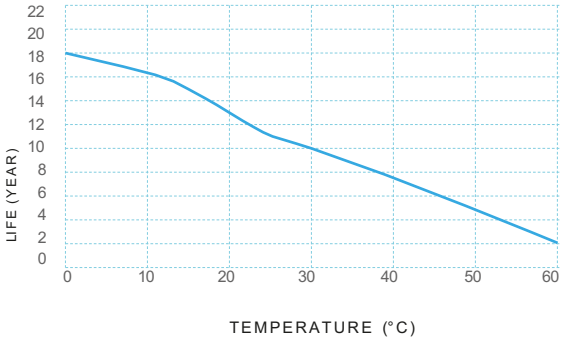




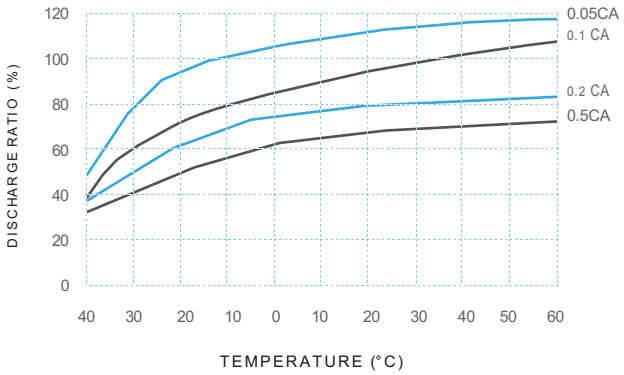
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



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LEAD CRYSTAL®: CHANGING THE FUTURE

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 SiO2 electrolyte solution that solidifies into a white crystalline powder when charged/discharged.

Cleaner & safe 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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