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

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POWERED BY
Betta Batteries

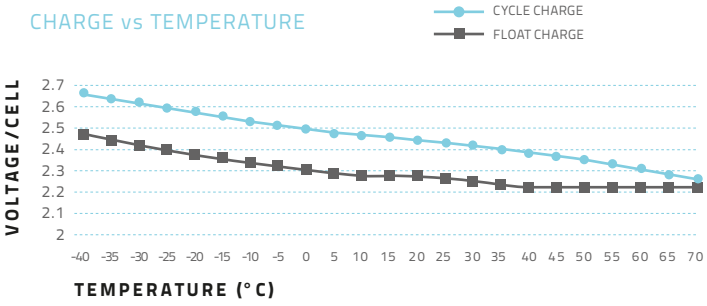
SPECIFICATION

Nominal Voltage		2V	
Rated Capacity (10 hour rate)		500 AH	
Dimension	Total Height (top of terminal)	335 mm	13.19"
	Height	330 mm	12.99"
	Length	244 mm	9.61"
	Width	175 mm	6.89"
Weight		Approximately 31.5 kg / 69.44 lbs	
Capacity 25°C	120 hour rate (5.0A)	600 AH	
	20 hour rate (26A)	560 AH	
	10 hour rate (50A)	500 AH	
Internal Resistance	Fully charged Battery (25°C)	0.35mΩ	
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	5000A (5S)		
Terminal	Standard	F4	
	Optional		
Charging (Constant Voltage)	Cycle	Initial Charging Current 150A 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)

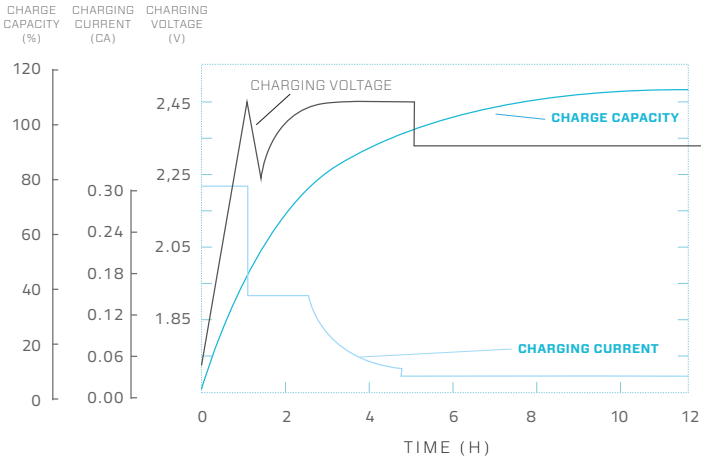
End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	1351.20	862.00	568.00	427.50	349.50	208.50	151.50	117.75	100.00	86.00	65.00	52.50	44.25	27.65	23.17
1.67V	1162.98	781.50	526.50	405.00	338.50	199.00	144.00	116.50	95.00	85.00	64.00	51.50	44.25	27.65	23.17
1.70V	1111.02	757.50	510.00	400.00	327.00	196.00	141.00	115.50	94.50	84.50	63.50	51.00	44.25	27.60	23.10
1.75V	1009.98	709.00	490.00	384.50	316.50	188.50	137.00	112.50	91.50	82.50	62.50	50.50	43.85	27.60	23.05
1.80V	892.98	649.50	471.50	370.50	303.00	182.00	135.00	110.50	89.50	80.50	61.00	50.00	42.90	27.50	22.95
1.83V	779.52	593.50	435.50	344.33	286.50	174.00	130.00	106.00	85.50	77.50	59.00	48.50	41.75	27.40	22.30
1.85V	666.48	537.50	400.00	318.50	270.50	166.50	125.00	102.00	82.00	75.00	57.00	47.15	40.55	27.35	21.65

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	2240.48	1508.51	1032.50	787.00	652.00	398.00	290.00	225.49	192.00	168.50	127.50	103.92	87.00	54.00	45.30
1.67V	2001.48	1406.50	966.50	753.00	635.00	385.60	283.00	224.50	186.00	166.50	124.98	101.50	87.00	54.00	45.30
1.70V	1936.94	1369.98	940.01	745.00	616.99	375.50	271.50	223.00	182.50	165.50	124.57	100.50	87.00	54.00	45.25
1.75V	1788.01	1287.99	909.00	722.01	600.00	363.02	265.00	219.50	178.00	163.00	122.00	99.49	87.00	54.00	45.20
1.80V	1620.99	1187.00	877.99	699.00	577.50	351.00	262.00	215.51	173.50	160.50	120.00	98.50	84.50	53.50	45.10
1.83V	1431.52	1098.98	819.99	655.00	548.50	338.00	253.00	208.50	167.50	156.00	116.00	96.00	82.50	53.50	43.95
1.85V	1242.00	1010.96	762.00	611.00	520.00	325.00	244.00	201.00	161.00	151.50	112.00	93.50	80.50	53.00	42.85

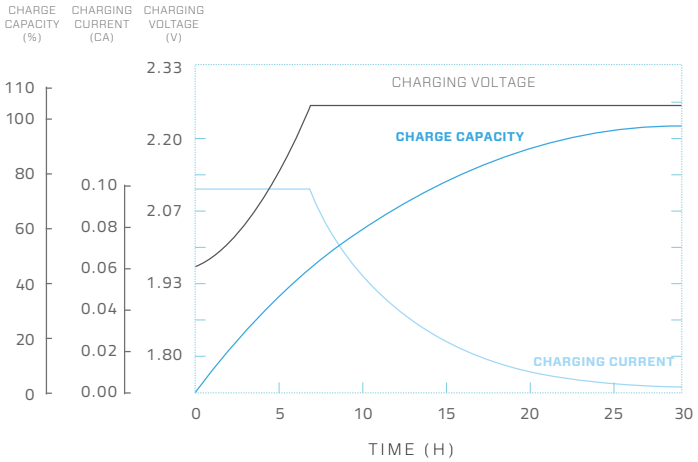
CYCLE CHARGE CHARACTERISTIC (25°C)

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

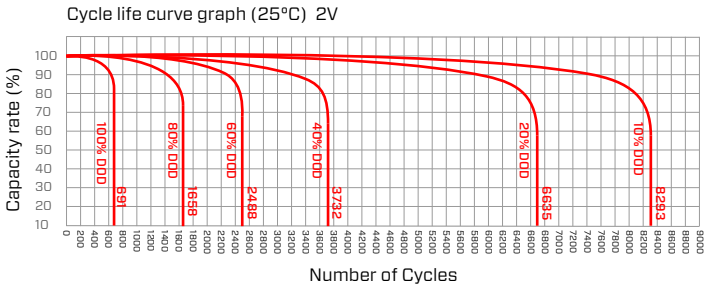


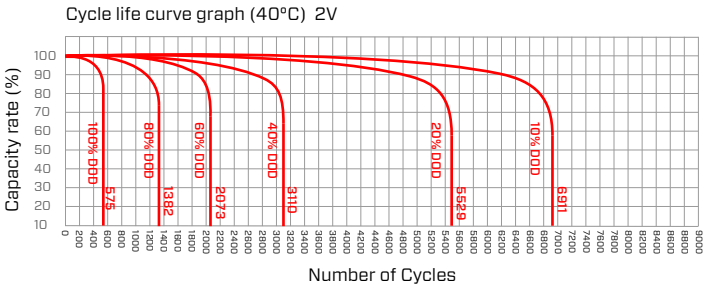
FLOATING CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

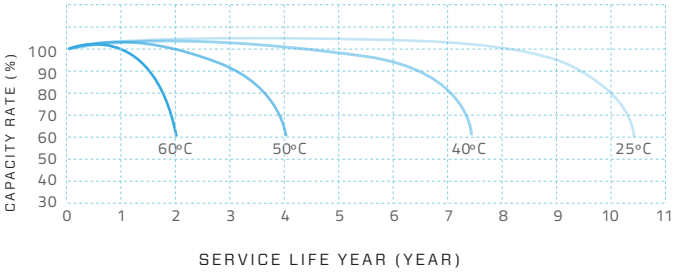


CYCLE LIFE CURVE GRAPH

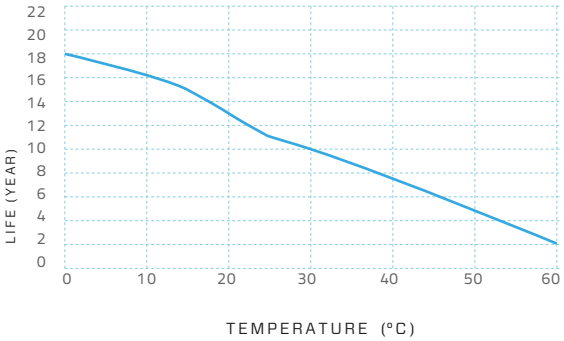




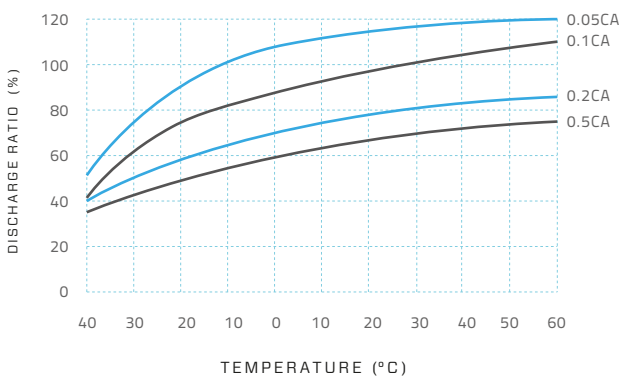
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



CNFJ-500 2V / 500 A

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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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