



Energy Evolved.

Lead Crystal Energy Solutions

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

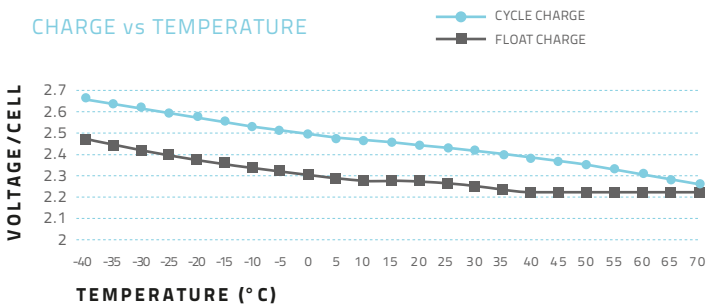
**LEAD
CRYSTAL[®]**
BATTERIES



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	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	4053.60	2586.0	1704.0	1282.5	1048.5	625.50	454.50	353.25	300.00	258.00	195.00	157.50	132.75	82.95	69.50
1.67V	3488.94	2344.5	1579.5	1215.0	1015.5	597.00	432.00	349.50	285.00	255.00	192.00	154.50	132.75	82.95	69.50
1.70V	3333.06	2272.5	1530.0	1200.0	981.00	588.00	423.00	346.50	283.50	253.50	190.50	153.00	132.75	82.80	69.30
1.75V	3029.94	2127.0	1470.0	1153.5	949.50	565.50	411.00	337.50	274.50	247.50	187.50	151.50	131.55	82.80	69.15
1.80V	2678.94	1948.5	1414.5	1111.5	909.00	546.00	405.00	331.50	268.50	241.50	183.00	150.00	128.70	82.50	68.85
1.83V	2338.56	1780.5	1306.5	1033.0	859.50	522.00	390.00	318.00	256.50	232.50	177.00	145.50	125.25	82.20	66.90
1.85V	1999.44	1612.5	1200.0	955.50	811.50	499.50	375.00	306.00	246.00	225.00	171.00	141.45	121.65	82.05	64.95

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

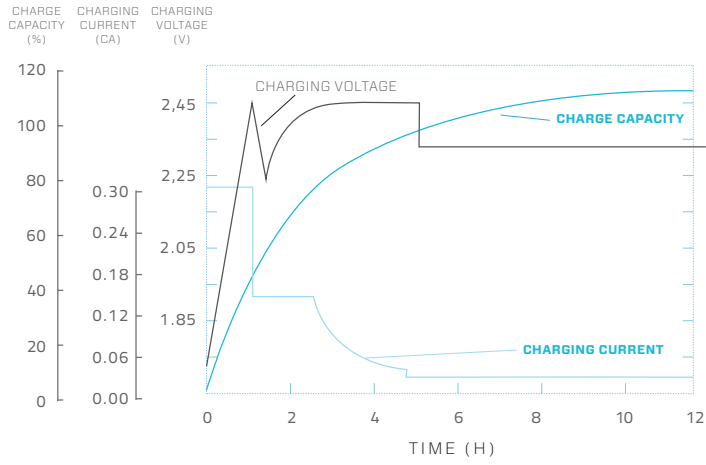
End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	6721.44	4525.52	3097.49	2361.01	1956.00	1194.00	870	676.47	576.00	505.50	382.50	311.75	261.00	162.00	135.90
1.67V	6004.44	4219.50	2899.51	2259.00	1905.00	1156.79	849	673.50	558.00	499.50	374.93	304.50	261.00	162.00	135.90
1.70V	5810.83	4109.93	2820.02	2235.00	1850.98	1126.51	814.5	669.00	547.50	496.49	373.70	301.50	261.00	162.00	135.75
1.75V	5364.03	3863.96	2726.99	2166.02	1800.01	1089.07	795	658.50	534.00	489.00	366.00	298.46	261.00	162.00	135.60
1.80V	4862.98	3561.01	2633.97	2096.99	1732.49	1053.00	786	646.53	520.50	481.50	360.00	295.50	253.50	160.50	135.30
1.83V	4294.56	3296.95	2459.98	1965.00	1645.49	1013.99	759	625.50	502.50	468.00	348.01	287.99	247.50	160.50	131.85
1.85V	3725.99	3032.89	2285.99	1833.01	1560.00	974.99	732	603.00	483.00	454.50	336.00	280.50	241.50	159.00	128.55

SPECIFICATION

Nominal Voltage	2V		
Rated Capacity (10 hour rate)	1500 AH		
Dimension	Total Height (top of terminal)	347 mm	13.66"
	Height	342mm	13.46"
	Length	401 mm	15.79"
	Width	351 mm	13.82"
Weight	Approximately 98.5 kg / 217.15 lbs		
Capacity	120 hour rate (15A)	1800 AH	
	25°C 20 hour rate (82.5A)	1650 AH	
	10 hour rate (150A)	1500 AH	
Internal Resistance	Fully charged Battery (25°C)	0.10mΩ	
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	15000A (5S)		
Terminal	Standard	F4	
	Optional		
Charging (Constant Voltage)	Cycle	Initial Charging Current 450A 2.45V/ (25°C)	
	Float	2.27V/ (25°C)	

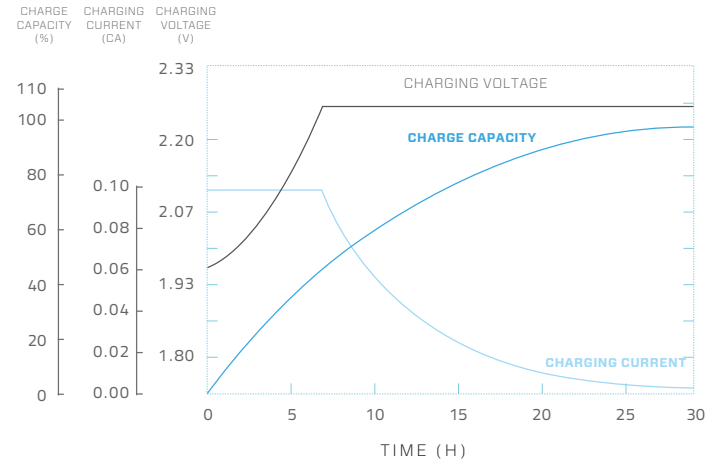
CYCLE CHARGE CHARACTERISTIC (25°C)

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



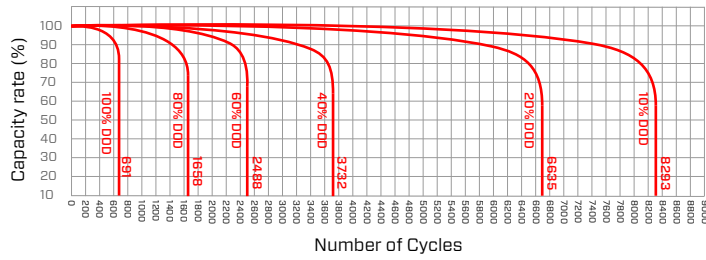
FLOATING CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

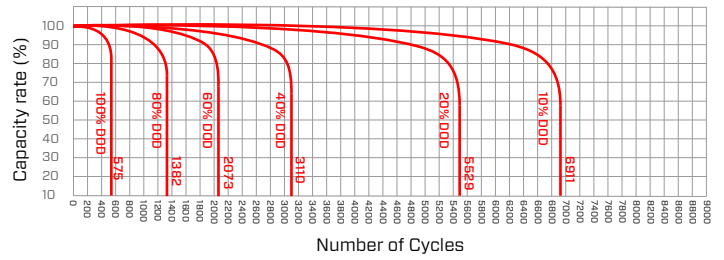


CYCLE LIFE CURVE GRAPH

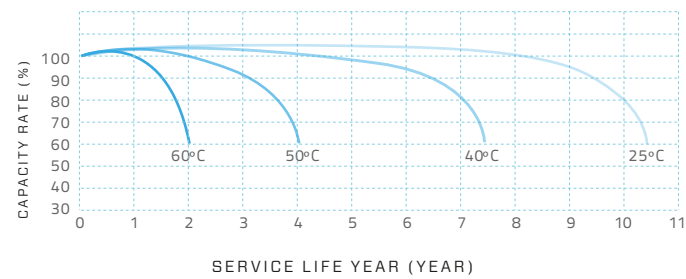
Cycle life curve graph (25°C) 2V



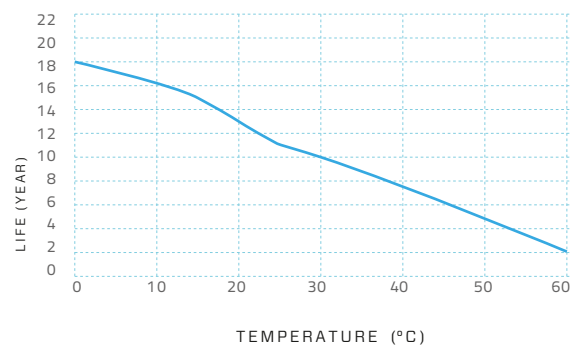
Cycle life curve graph (40°C) 2V



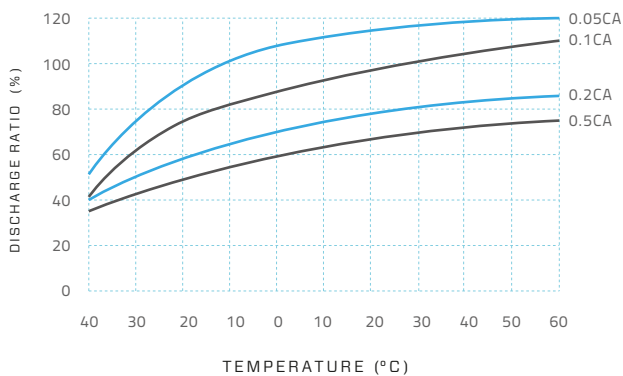
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



CNFJ-1500 2V / 1500 A



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 SiO₂ 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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