6-CNFJ-22 12V/22Ah

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

POWERED BY
Betta Batteries

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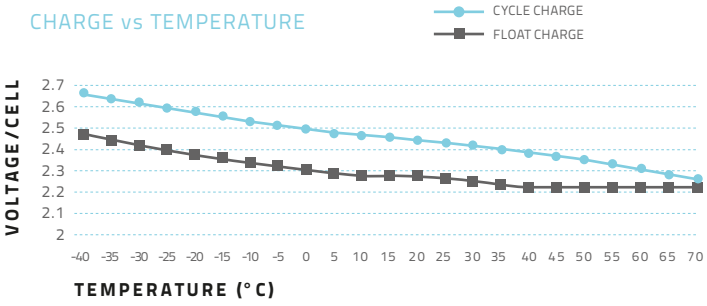
SPECIFICATION

Nominal Voltage		12V	
Rated Capacity (10 hour rate)		22 AH	
Dimension	Total Height (top of terminal)	170 mm	6.69"
	Height	170 mm	6.69"
	Length	181 mm	7.13"
	Width	76 mm	2.99"
Weight		Approximately 6.9 kg / 15.21 lbs	
Capacity 25°C	120 hour rate (220mA)	26.4 AH	
	20 hour rate (1.2A)	24AH	
	10 hour rate (2.2A)	22AH	
Internal Resistance	Fully charged Battery (25°C)	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	220A(5S)		
Terminal	Standard	F5	
	Optional		
Charging (Constant Voltage)	Cycle	Initial Charging Current 6.6A 14.7V/ (25℃)	
	Float	13.6V/ (25℃)	

DISCHARGE CURRENT AND END VOLTAGE

Discharge current (A)	End voltage (V)
0.05C or below or Intermittent discharge	11.4
0.05C of current close to it	11.1
0.1C of current close to it	10.8
0.2C of current close to it	10.5
From 0.2C to 0.5C	10.2
From 0.5C to 1C	9.6
From 1C to 3C	9.0
Current in excess of 3C	7.8

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)

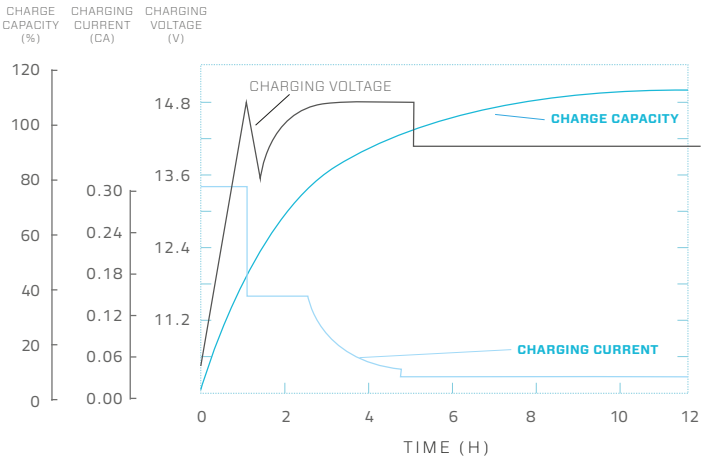
End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	80.73	42.72	25.81	18.82	15.16	8.68	6.31	4.95	4.22	3.59	2.73	2.28	1.91	1.24	1.02
1.67V	75.03	41.32	25.43	18.69	15.13	8.65	6.19	4.92	4.16	3.56	2.73	2.25	1.91	1.24	1.01
1.70V	74.26	40.69	25.18	18.44	15.01	8.57	6.15	4.90	4.09	3.52	2.72	2.25	1.90	1.24	1.01
1.75V	68.03	39.42	24.93	18.31	14.75	8.41	6.13	4.83	4.06	3.50	2.71	2.23	1.89	1.23	1.01
1.80V	61.04	36.87	23.91	17.80	14.37	8.28	6.10	4.82	4.01	3.46	2.70	2.20	1.88	1.19	1.01
1.83V	58.34	33.83	23.53	17.17	13.73	8.20	5.86	4.62	3.92	3.33	2.64	2.11	1.81	1.18	0.99
1.85V	54.67	32.81	22.00	16.53	13.35	7.87	5.71	4.55	3.82	3.22	2.61	2.09	1.78	1.16	0.99

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	134.90	75.02	48.32	35.22	28.33	16.40	11.99	9.50	8.02	6.89	5.31	4.40	3.70	2.47	2.02
1.67V	128.42	73.87	46.36	34.97	28.35	16.40	11.84	9.49	8.02	6.88	5.31	4.39	3.70	2.47	2.02
1.70V	127.66	73.37	46.34	34.97	28.10	16.28	11.81	9.45	7.90	6.83	5.28	4.35	3.66	2.45	2.02
1.75V	118.88	72.47	46.39	34.97	27.97	16.15	11.79	9.43	7.87	6.78	5.25	4.32	3.66	2.45	2.01
1.80V	109.10	68.79	45.39	34.33	27.85	16.15	11.77	9.41	7.82	6.78	5.24	4.30	3.66	2.39	2.01
1.83V	105.28	63.19	45.01	33.31	26.70	16.02	11.44	9.09	7.73	6.56	5.24	4.17	3.60	2.37	2.00
1.85V	97.52	61.79	41.83	32.04	25.94	15.64	11.13	8.98	7.51	6.43	5.04	4.13	3.53	2.34	1.98

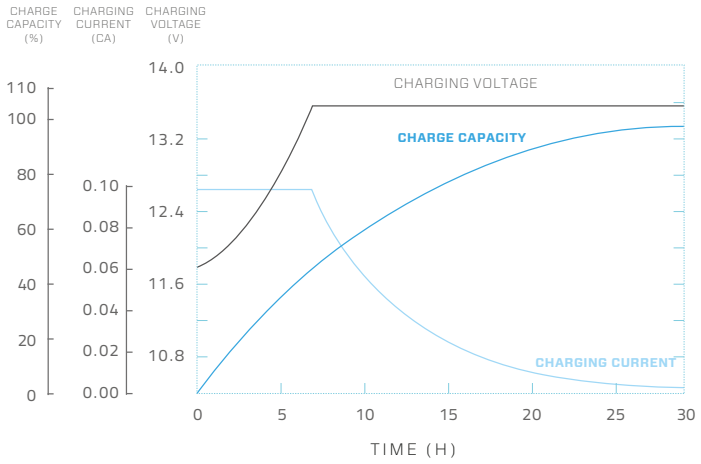
CYCLE CHARGE CHARACTERISTIC (25°C)

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



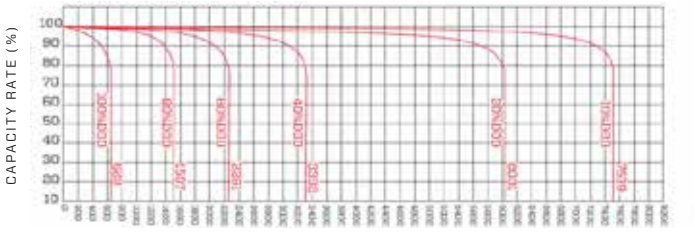
FLOATING CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

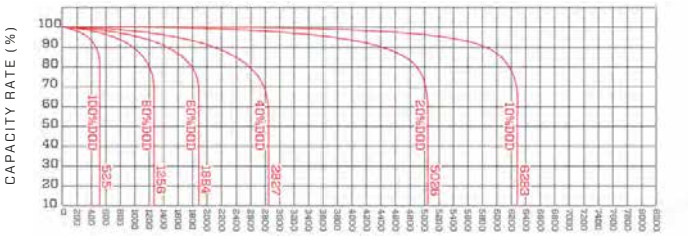


CYCLE LIFE CURVE GRAPH

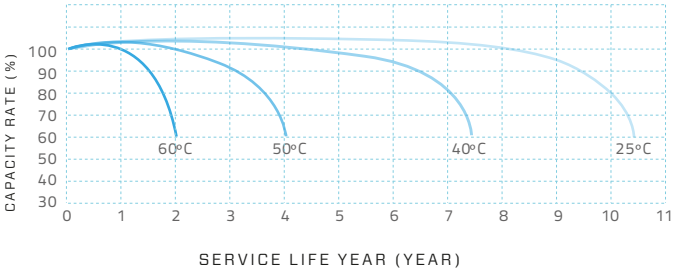
CYCLE LIFE CURVE GRAPH (25°C)



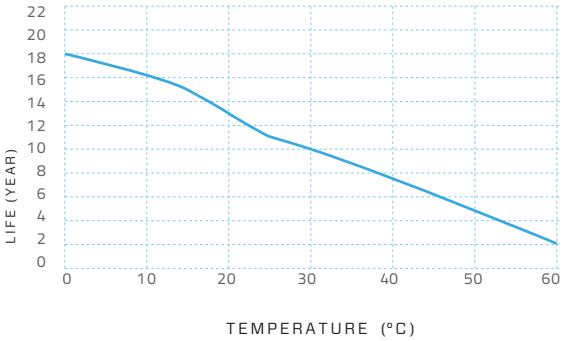
CYCLE LIFE CURVE GRAPH (40°C)



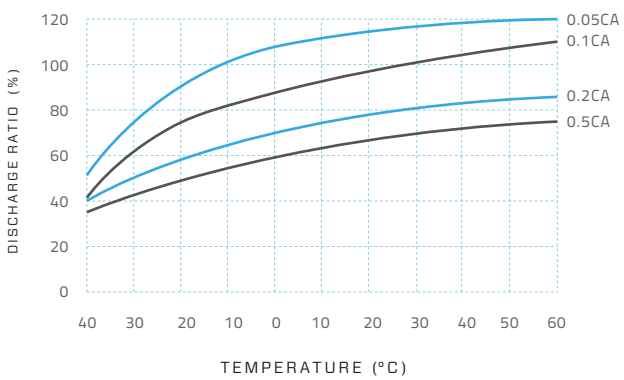
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



6-CNFJ-22 12V/22Ah

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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