

LEAD CRYSTAL® BATTERIES



POWERED BY

Betta Batteries

6- CNFJ-24 12V / 24Ah

Ver. 1902-1

This battery **MUST** be charged and maintained in accordance with the datasheet & user manual. Charge currents **MUST** be according to the following, during boost phase - CNFJ & CNFT - 0.3C @ C10 rate (or 30% of the C10 rated Capacity) - Incorrect charging may void or reduce your warranty.

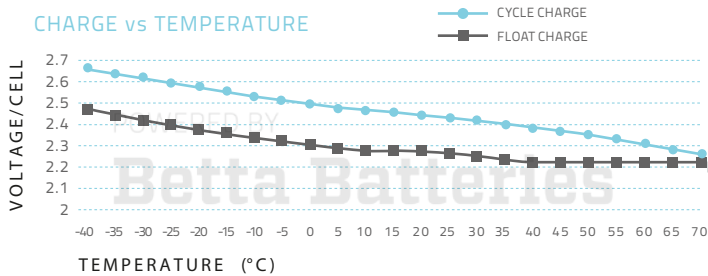
SPECIFICATION

Nominal Voltage		12V	
Rated Capacity (10 hour rate)		24 AH	
Dimension	Total Height (top of terminal)	125 mm	4.92"
	Height	125mm	4.92"
	Length	176 mm	6.93"
	Width	166 mm	6.54"
Weight		Approximately 7.7 kg / 16.97 lbs	
Capacity 25°C	120 hour rate (0.24A)	29 AH	
	20 hour rate (1.35A)	27 AH	
	10 hour rate (2.4A)	24AH	
Internal Resistance	Fully charged Battery (25°C)	8.5mΩ	
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	240A (5S)		
Terminal	Standard	F5	
	Optional		
Charging this battery (Constant Voltage)	Cyclic Application	Initial Charging Current 7.2A 14.7V / (25°C)	
	Float Application	13.6V / (25°C)	

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



All Betta Batteries Lead Crystal Batteries cases are manufactured with UL94 V-2 rated ABS plastic. UL94 V-0 rated ABS cases are available via special order.

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)

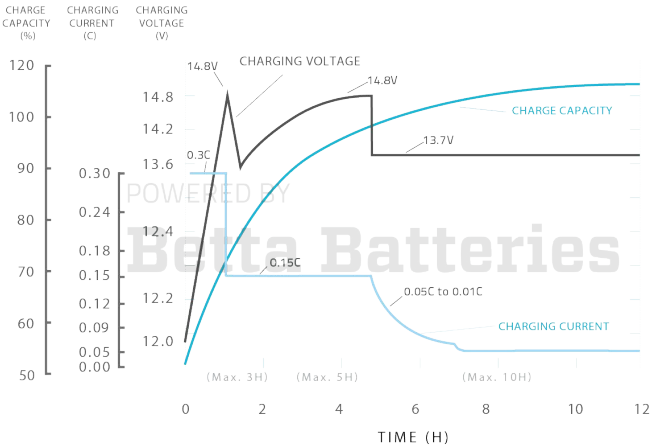
End Voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	88.07	46.61	28.16	20.53	16.54	9.47	6.88	5.40	4.60	3.91	2.98	2.48	2.08	1.36	1.11
1.67V	81.85	45.08	27.74	20.39	16.51	9.43	6.76	5.37	4.54	3.88	2.98	2.46	2.08	1.35	1.10
1.70V	81.01	44.39	27.47	20.12	16.37	9.35	6.71	5.34	4.47	3.84	2.97	2.46	2.07	1.35	1.10
1.75V	74.22	43.00	27.19	19.98	16.09	9.17	6.69	5.27	4.43	3.82	2.95	2.43	2.06	1.34	1.10
1.80V	66.59	40.22	26.08	19.42	15.68	9.03	6.66	5.26	4.37	3.77	2.94	2.40	2.05	1.30	1.10
1.83V	63.65	36.90	25.67	18.73	14.98	8.95	6.40	5.04	4.27	3.63	2.88	2.30	1.97	1.28	1.08
1.85V	59.64	35.79	24.00	18.04	14.57	8.59	6.23	4.97	4.16	3.51	2.84	2.28	1.94	1.27	1.08

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	147.17	81.84	52.71	38.42	30.91	17.89	13.08	10.36	8.75	7.52	5.80	4.80	4.04	2.69	2.21
1.67V	140.10	80.59	50.58	38.15	30.93	17.89	12.91	10.35	8.75	7.50	5.80	4.79	4.04	2.69	2.21
1.70V	139.26	80.03	50.55	38.15	30.65	17.75	12.89	10.31	8.61	7.45	5.76	4.74	3.99	2.68	2.21
1.75V	129.69	79.06	50.61	38.14	30.52	17.62	12.86	10.29	8.59	7.39	5.73	4.71	3.99	2.68	2.19
1.80V	119.01	75.04	49.52	37.45	30.38	17.62	12.84	10.26	8.53	7.39	5.71	4.69	3.99	2.61	2.19
1.83V	114.85	68.94	49.10	36.34	29.13	17.48	12.48	9.92	8.43	7.16	5.71	4.55	3.93	2.58	2.18
1.85V	106.39	67.41	45.64	34.96	28.30	17.06	12.14	9.79	8.20	7.02	5.49	4.51	3.86	2.55	2.16

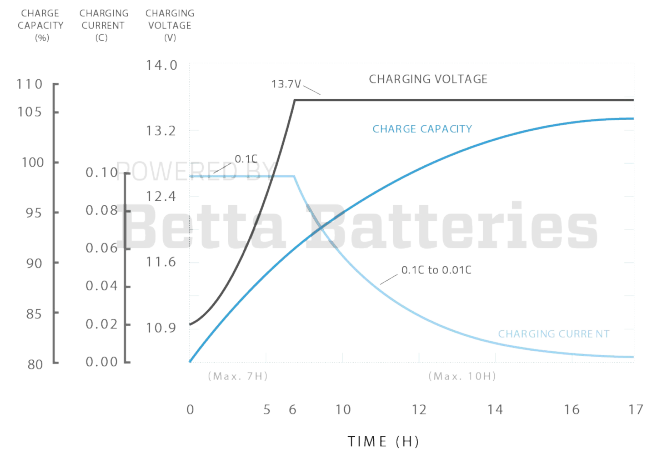
CYCLE CHARGE CHARACTERISTIC (25°C)

REGULAR CYCLE CHARGE CHARACTERISTICS - 77°F (25°C) 50% DOD (12V) @ C10



FLOATING CHARGE CHARACTERISTIC (25°C)

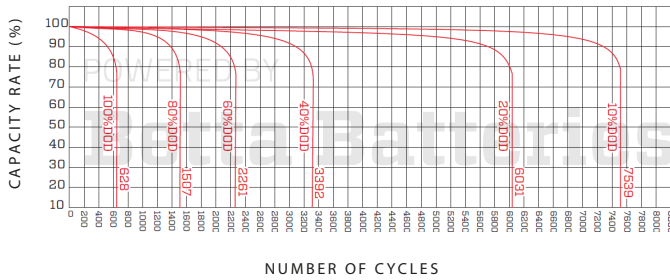
FLOATING CHARGE CHARACTERISTICS - 77°F (25°C) 80% DOD (12V) @ C10



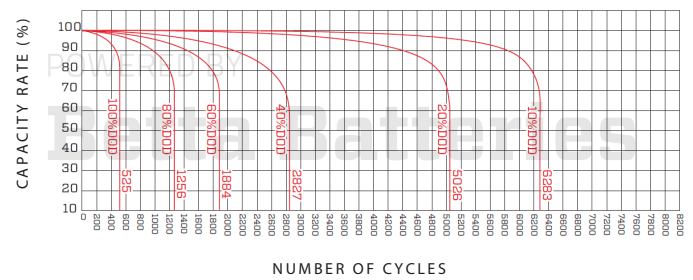
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CYCLE LIFE CURVE GRAPH

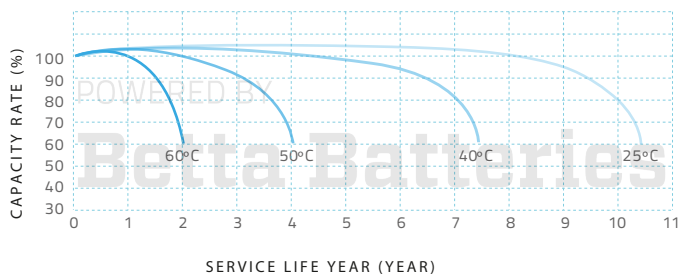
CYCLE LIFE CURVE GRAPH (25°C)



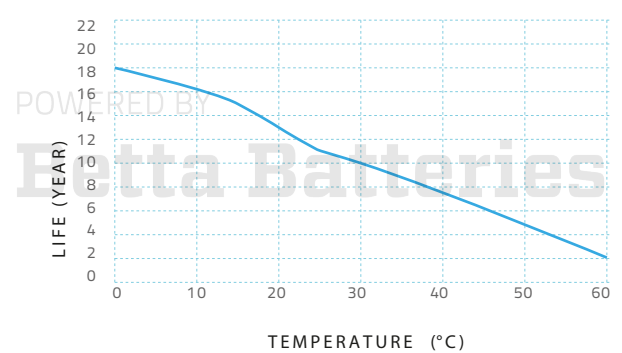
CYCLE LIFE CURVE GRAPH (40°C)



TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY

