

CB12-7.2GS

CRYSTAL BATTERY™ - GS GENERAL STORAGE

Crystal Batteries™ are a unique technology that overcomes conventional battery problems by having a nearly solid-state electrolyte. This allows the battery to be discharged deeper, cycle more often, has a longer lifetime and can withstand extreme temperatures.

The patented Crystal technology uses a unique advanced formula, a new type of composite SiO2 electrolyte developed to completely replace traditional sulphuric acid solutions.



CRYSTAL TECHNOLOGY

Our unique electrolyte crystallizes on the battery plates, giving the batteries their powerful features.



BETTER USAGE PERFORMANCE

Charges up to three times faster than conventional alternatives. Excellent high-current discharge.



FULL RECOVERY

Crystal Batteries™ can be 100% discharged and restored to full capacity.



PROVEN TRACK RECORD

Crystal Batteries™ have been successfully used in the telecom, industrial EV and storage markets.



THE SAFEST

No risk of thermal runaway, spontaneous combustion, no leakage, and fewer harmful chemicals.



UP TO 99% RECYCLABLE

A sustainable circular economy, less acid, no antimony or cadmium.



EXTREME TEMPERATURES

Extreme temperature resistance. Operates from -40°C (40°F) to +65°C (149°F).



LONG BATTERY LIFE

A float service life of up to 11 years. Up to 3,100 charge / discharge cycles at 25°C (50% DoD).

TECHNICAL SPECIFICATIONS

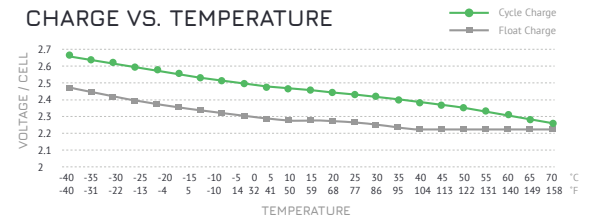
SPECIFICATION

NOMINAL VOLTAGE	12V
RATED CAPACITY (10 HOUR RATE)	7.2Ah
WEIGHT	~ 2.2 kg / 4.6 lbs
DIMENSIONS	Height: 102 mm (4") Length: 151 mm (5.9") Width: 65 mm (2.6")
CAPACITY 25 °C (77 °F)	120 hour rate (70mA) - 8.4Ah 20 hour rate (390mA) - 7.8Ah 10 hour rate (720mA) - 7.2Ah
INTERNAL RESISTANCE - FULLY CHARGED BATTERY 25°C (77 °F)	< 30mΩ
SELF DISCHARGE 25°C (77 °F) (STORAGE CAPACITY)	Capacity after 3 month - 95% Capacity after 6 month - 85% Capacity after 12 month - 80%
MAX DISCHARGE CURRENT 25°C (77 °F)	72 A (5s)
TERMINAL	F2 (250)
(CHARGING) CYCLE	Initial Charging Current 2.16A 14.7V / 25°C (77°F)
(CHARGING) FLOAT	13.6V / 25°C (77°F)

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



DATASHEET - CB12-7.2GS

CELL CHARGE VOLTAGE VS. TEMPERATURE CHART

Temperature (°C)	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Temperature (°F)	-40	-31	-22	-13	-4	5	14	23	32	41	50	59	68	77	86	95	104	113	122	131	140	149	158
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	2.42	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

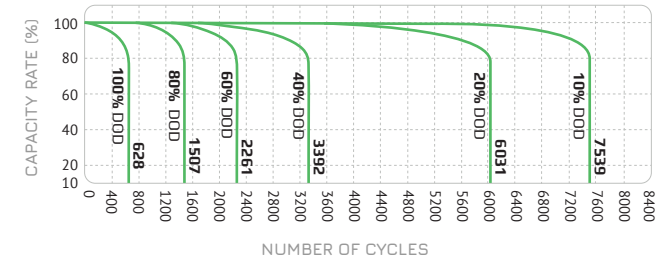
CONSTANT CURRENT DISCHARGE CHARACTERISTICS: UNITS AMPERES 25°C (77°F)

End Cell Voltage	5 min	15 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	26.42	13.98	8.45	6.16	4.96	2.84	2.06	1.62	1.38	1.17	0.89	0.74	0.63	0.41	0.33
1.67V	24.55	13.52	8.32	6.12	4.95	2.83	2.03	1.61	1.36	1.17	0.89	0.74	0.62	0.41	0.33
1.70V	24.30	13.32	8.24	6.03	4.91	2.81	2.01	1.60	1.34	1.15	0.89	0.74	0.62	0.40	0.33
1.75V	22.27	12.90	8.16	5.99	4.83	2.75	2.01	1.58	1.33	1.14	0.89	0.73	0.62	0.40	0.33
1.80V	19.98	12.07	7.82	5.83	4.70	2.71	2.00	1.58	1.31	1.13	0.88	0.72	0.62	0.39	0.33
1.83V	19.09	11.07	7.70	5.62	4.49	2.68	1.92	1.51	1.28	1.09	0.86	0.69	0.59	0.38	0.33
1.85V	17.89	10.74	7.20	5.41	4.37	2.58	1.87	1.49	1.25	1.05	0.85	0.68	0.58	0.38	0.32

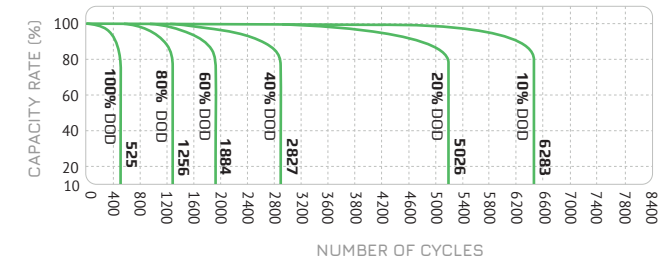
DISCHARGE DATA WITH CONSTANT POWER UNITS: WATTS PER CELL 25°C (77°F)

End Cell Voltage	5 min	15 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	44.15	24.55	15.81	11.53	9.27	5.37	3.92	3.11	2.63	2.26	1.74	1.44	1.21	0.81	0.66
1.67V	42.03	24.18	15.17	11.44	9.28	5.37	3.87	3.10	2.63	2.25	1.74	1.44	1.21	0.81	0.66
1.70V	41.78	24.01	15.17	11.44	9.20	5.33	3.87	3.09	2.58	2.23	1.73	1.42	1.20	0.80	0.66
1.75V	38.91	23.72	15.18	11.44	9.15	5.28	3.86	3.09	2.58	2.22	1.72	1.41	1.20	0.80	0.66
1.80V	35.70	22.51	14.86	11.24	9.11	5.28	3.85	3.08	2.56	2.22	1.71	1.41	1.20	0.78	0.66
1.83V	34.46	20.68	14.73	10.90	8.74	5.24	3.75	2.98	2.53	2.15	1.71	1.36	1.18	0.77	0.65
1.85V	31.92	20.22	13.69	10.49	8.49	5.12	3.64	2.94	2.46	2.11	1.65	1.35	1.16	0.77	0.65

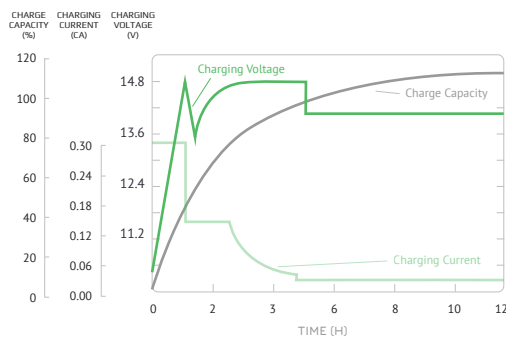
CYCLE LIFE CURVE GRAPH 25°C (77°F).



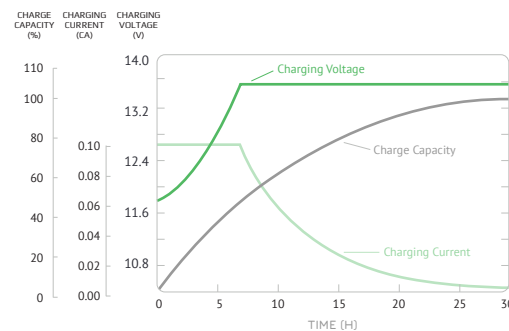
CYCLE LIFE CURVE GRAPH 40°C (104°F).



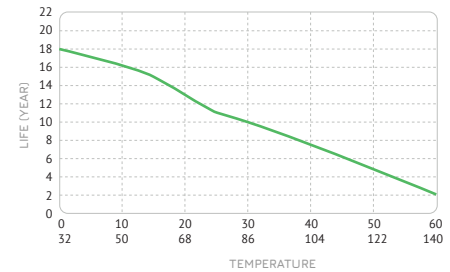
REGULAR CYCLE CHARGE CHARACTERISTICS 25°C (77°F).



FLOATING CHARACTERISTICS 25°C (77°F).



FLOAT SERVICE LIFE CURVE GRAPH.



TEMPERATURE & DISCHARGE CAPACITY.

