

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

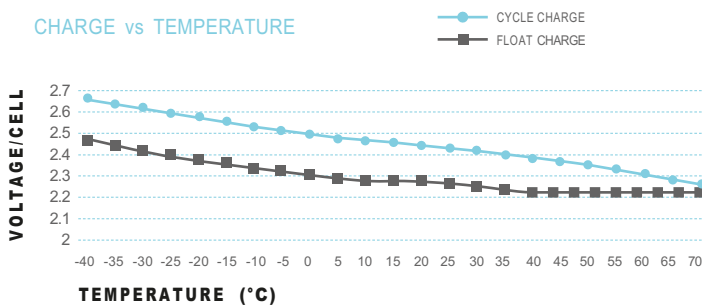
LEAD CRYSTAL[®] BATTERIES



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 |
| 0.1 C 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 | 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 | 2161.92 | 1379.2 | 908.8 | 684 | 559.2 | 333.6 | 242.4 | 188.4 | 160 | 137.6 | 104 | 84 | 70.8 | 44.24 | 37.07 |
| 1.67V | 1860.77 | 1250.4 | 842.4 | 648 | 541.6 | 318.4 | 230.4 | 186.4 | 152 | 136 | 102.4 | 82.4 | 70.8 | 44.24 | 37.07 |
| 1.70V | 1777.63 | 1212 | 816 | 640 | 523.2 | 313.6 | 225.6 | 184.8 | 151.2 | 135.2 | 101.6 | 81.6 | 70.8 | 44.16 | 36.96 |
| 1.75V | 1615.97 | 1134.4 | 784 | 615.2 | 506.4 | 301.6 | 219.2 | 180 | 146.4 | 132 | 100 | 80.8 | 70.16 | 44.16 | 36.88 |
| 1.80V | 1428.77 | 1039.2 | 754.4 | 592.8 | 484.8 | 291.2 | 216 | 176.8 | 143.2 | 128.8 | 97.6 | 80 | 68.64 | 44 | 36.72 |
| 1.83V | 1247.23 | 949.6 | 696.8 | 550.93 | 458.4 | 278.4 | 208 | 169.6 | 136.8 | 124 | 94.4 | 77.6 | 66.8 | 43.84 | 35.68 |
| 1.85V | 1066.37 | 860 | 640 | 509.6 | 432.8 | 266.4 | 200 | 163.2 | 131.2 | 120 | 91.2 | 75.44 | 64.88 | 43.76 | 34.64 |

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

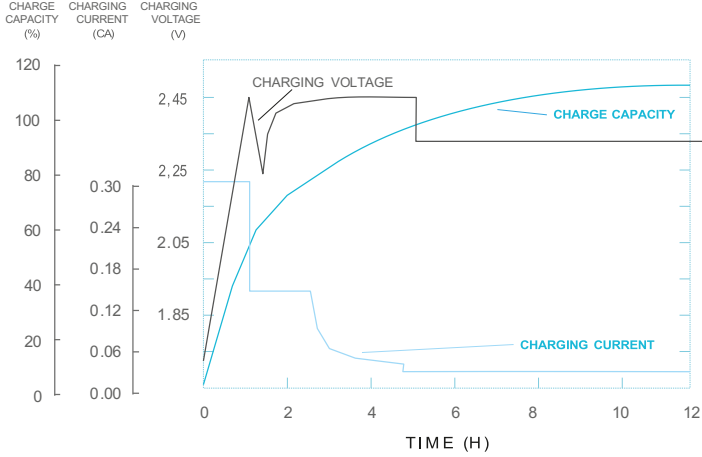
| End Voltage per cell | 5min | 15min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 12h | 20h | 24h |
|----------------------|---------|---------|---------|---------|--------|--------|-------|--------|-------|--------|--------|--------|-------|------|-------|
| 1.60V | 3584.77 | 2413.61 | 1651.99 | 1259.2 | 1043.2 | 636.8 | 464 | 360.79 | 307.2 | 269.6 | 204 | 166.27 | 139.2 | 86.4 | 72.48 |
| 1.67V | 3202.37 | 2250.4 | 1546.4 | 1204.8 | 1016 | 616.96 | 452.8 | 359.2 | 297.6 | 266.4 | 199.96 | 162.4 | 139.2 | 86.4 | 72.48 |
| 1.70V | 3099.11 | 2191.96 | 1504.01 | 1192 | 987.19 | 600.8 | 434.4 | 356.8 | 292 | 264.79 | 199.3 | 160.8 | 139.2 | 86.4 | 72.4 |
| 1.75V | 2860.82 | 2060.78 | 1454.4 | 1155.21 | 960 | 580.83 | 424 | 351.2 | 284.8 | 260.8 | 195.2 | 159.18 | 139.2 | 86.4 | 72.32 |
| 1.80V | 2593.59 | 1899.21 | 1404.78 | 1118.39 | 923.99 | 561.6 | 419.2 | 344.82 | 277.6 | 256.8 | 192 | 157.6 | 135.2 | 85.6 | 72.16 |
| 1.83V | 2290.43 | 1758.37 | 1311.99 | 1048 | 877.6 | 540.8 | 404.8 | 333.6 | 268 | 249.6 | 185.61 | 153.6 | 132 | 85.6 | 70.32 |
| 1.85V | 1987.2 | 1617.54 | 1219.19 | 977.6 | 832 | 519.99 | 390.4 | 321.6 | 257.6 | 242.4 | 179.2 | 149.6 | 128.8 | 84.8 | 68.56 |

SPECIFICATION

| | | | |
|-------------------------------|----------------------------------|--|--------|
| Nominal Voltage | 2V | | |
| Rated Capacity (10 hour rate) | 800 AH | | |
| Dimension | Total Height (top of terminal) | 335 mm | 13.19" |
| | Height | 330 mm | 12.99" |
| | Length | 410 mm | 16.14" |
| | Width | 175 mm | 6.89" |
| Weight | Approximately 55 kg / 121.15 lbs | | |
| Capacity | 120 hour rate (8.0A) | 960 AH | |
| 25°C | 20 hour rate (44A) | 880 AH | |
| | 10 hour rate (80A) | 800 AH | |
| Internal Resistance | Fully charged Battery (25°C) | 0.2 mΩ | |
| 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 | 6000A (5S) | | |
| Terminal | Standard | F4 | |
| | Optional | | |
| Charging (Constant Voltage) | Cycle | Initial Charging Current 240A 2.45V/ (25°C) | |
| | Float | 2.27V/ (25°C) | |

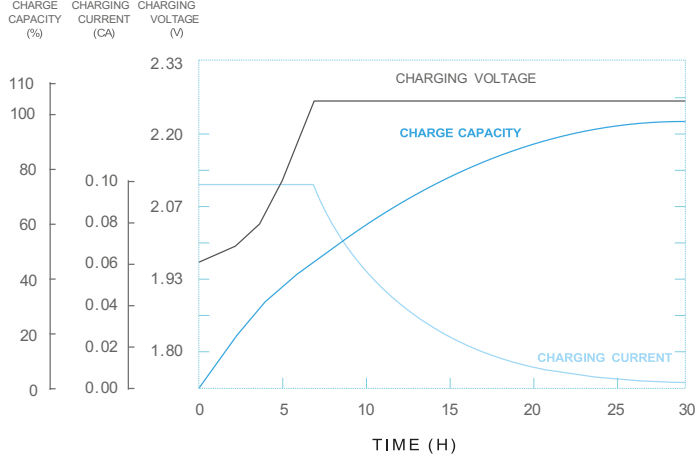
CYCLE CHARGE CHARACTERISTIC (25°C)

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



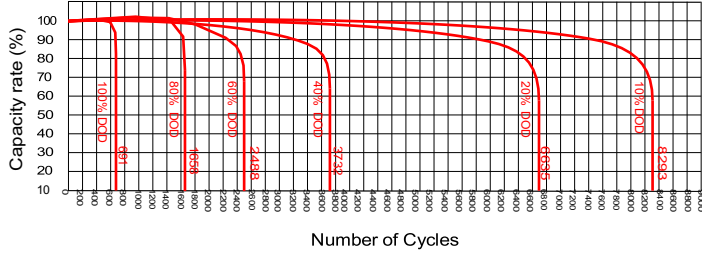
FLOATING CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

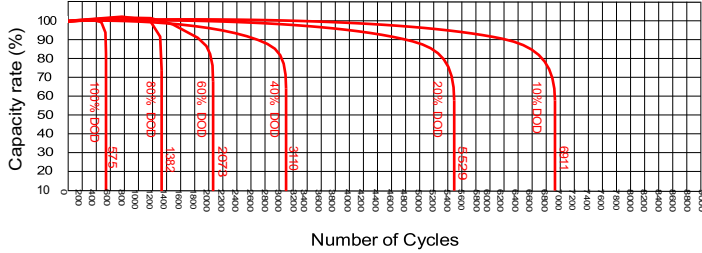


CYCLE LIFE CURVE GRAPH

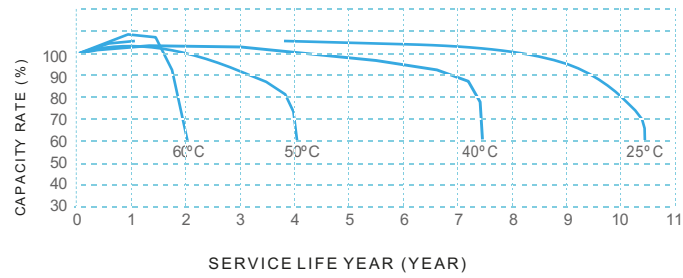
Cycle life curve graph (25°C) 2V



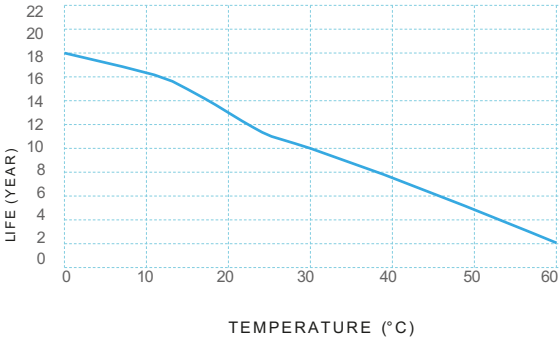
Cycle life curve graph (40°C) 2V



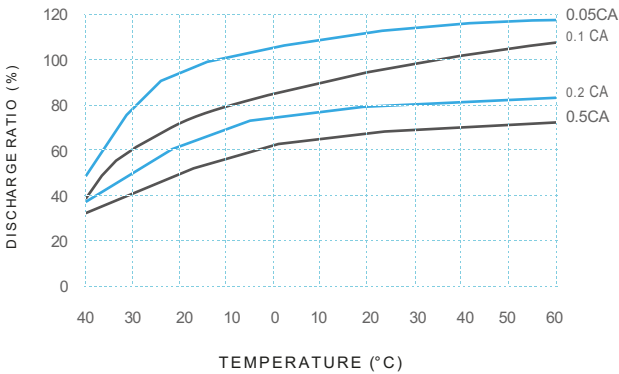
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



CNFJ-800 2V/800Ah

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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