

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

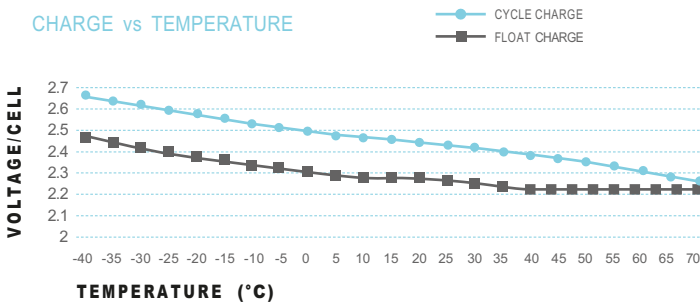
LEAD CRYSTAL[®] BATTERIES



DISCHARGE CURRENT AND END VOLTAGE

| Discharge current (A) | End voltage (V) |
|------------------------------------------|-----------------|
| 0.05C or below or Intermittent discharge | 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 | 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 | 623.83 | 330.14 | 199.48 | 145.43 | 117.13 | 67.11 | 48.74 | 38.22 | 32.60 | 27.71 | 21.13 | 17.59 | 14.76 | 9.61 | 7.85 |
| 1.67V | 579.77 | 319.33 | 196.52 | 144.43 | 116.93 | 66.82 | 47.86 | 38.03 | 32.13 | 27.51 | 21.10 | 17.39 | 14.74 | 9.58 | 7.82 |
| 1.70V | 573.85 | 314.43 | 194.55 | 142.48 | 115.96 | 66.23 | 47.56 | 37.83 | 31.64 | 27.22 | 21.03 | 17.39 | 14.69 | 9.55 | 7.81 |
| 1.75V | 525.71 | 304.57 | 192.61 | 141.51 | 113.99 | 64.95 | 47.36 | 37.35 | 31.35 | 27.02 | 20.93 | 17.20 | 14.62 | 9.51 | 7.80 |
| 1.80V | 471.65 | 284.92 | 184.72 | 137.56 | 111.04 | 63.97 | 47.17 | 37.24 | 30.95 | 26.73 | 20.83 | 17.00 | 14.54 | 9.19 | 7.78 |
| 1.83V | 450.84 | 261.39 | 181.80 | 132.67 | 106.13 | 63.38 | 45.30 | 35.67 | 30.27 | 25.75 | 20.39 | 16.31 | 13.95 | 9.09 | 7.68 |
| 1.85V | 422.48 | 253.50 | 170.00 | 127.75 | 103.17 | 60.83 | 44.12 | 35.18 | 29.48 | 24.89 | 20.15 | 16.12 | 13.76 | 8.99 | 7.62 |

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 | 1042.43 | 579.69 | 373.36 | 272.16 | 218.94 | 126.75 | 92.65 | 73.39 | 62.00 | 53.25 | 41.07 | 34.00 | 28.59 | 19.06 | 15.62 |
| 1.67V | 992.34 | 570.84 | 358.26 | 270.20 | 219.10 | 126.75 | 91.47 | 73.30 | 62.00 | 53.16 | 41.07 | 33.90 | 28.59 | 19.06 | 15.62 |
| 1.70V | 986.44 | 566.91 | 358.09 | 270.20 | 217.13 | 125.76 | 91.28 | 73.03 | 61.02 | 52.76 | 40.78 | 33.60 | 28.30 | 18.96 | 15.62 |
| 1.75V | 918.65 | 560.03 | 358.49 | 270.19 | 216.16 | 124.78 | 91.08 | 72.90 | 60.82 | 52.37 | 40.58 | 33.38 | 28.30 | 18.96 | 15.52 |
| 1.80V | 843.02 | 531.54 | 350.76 | 265.28 | 215.17 | 124.78 | 90.98 | 72.71 | 60.43 | 52.37 | 40.48 | 33.21 | 28.30 | 18.47 | 15.52 |
| 1.83V | 813.53 | 488.31 | 347.82 | 257.42 | 206.33 | 123.80 | 88.43 | 70.25 | 59.74 | 50.70 | 40.48 | 32.23 | 27.81 | 18.28 | 15.43 |
| 1.85V | 753.59 | 477.50 | 323.25 | 247.61 | 200.44 | 120.85 | 85.97 | 69.37 | 58.07 | 49.72 | 38.91 | 31.93 | 27.31 | 18.08 | 15.33 |

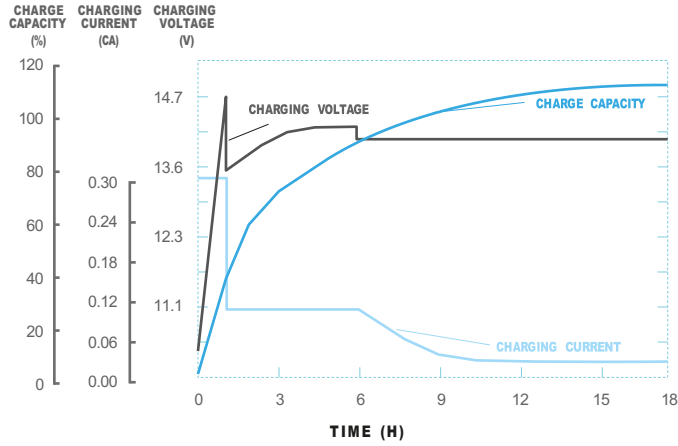
SPECIFICATION

| | | | |
|-------------------------------|---------------------------------|-----------------------------------------------|--------|
| Nominal Voltage | 12V | | |
| Rated Capacity (10 hour rate) | 170 AH | | |
| Dimension | Total Height (top of terminal) | 320 mm | 12.6" |
| | Height | 320 mm | 12.6" |
| | Length | 546 mm | 21.50" |
| | Width | 125 mm | 4.92" |
| Weight | Approximately 50kg / 110.23 lbs | | |
| Capacity | 120 hour rate (1.8A) | 216 AH | |
| | 25°C 20 hour rate (9.5A) | 190 AH | |
| | 10 hour rate (17) | 170 AH | |
| Internal Resistance | Fully charged Battery (25°C) | 3m0 | |
| 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 | 1700A (5S) | | |
| Terminal | Standard | F4 | |
| | Optional | | |
| Charging (Constant Voltage) | Cycle | Initial Charging Current 51A 14.7V/ (25°C) | |
| | Float | 13.6V/ (25°C) | |

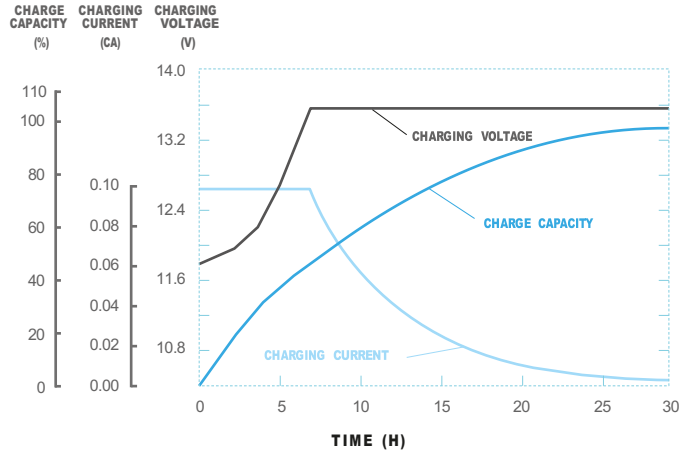
CYCLE CHARGE CHARACTERISTIC (25°C)

FLOATING CHARGE CHARACTERISTIC (25°C)

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

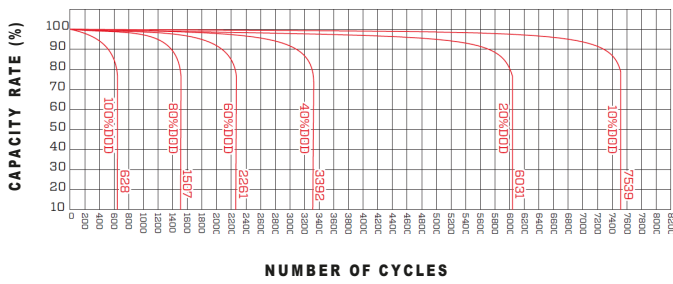


FLOATING CHARGE CHARACTERISTICS 77°F (25°C)

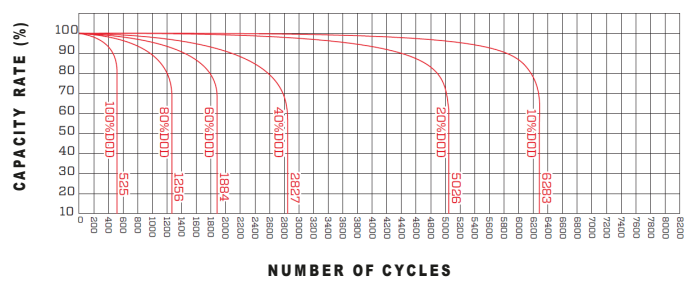


CYCLE LIFE CURVE GRAPH

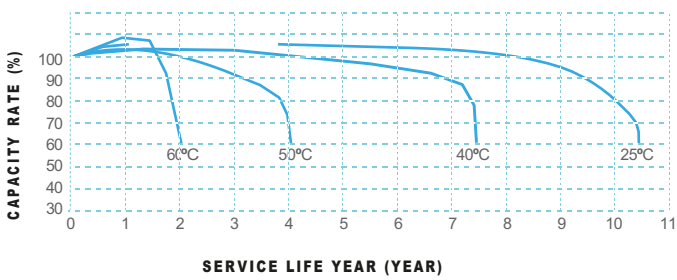
CYCLE LIFE CURVE GRAPH (25°C)



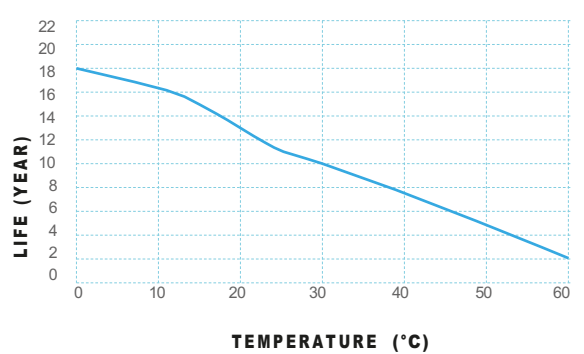
CYCLE LIFE CURVE GRAPH (40°C)



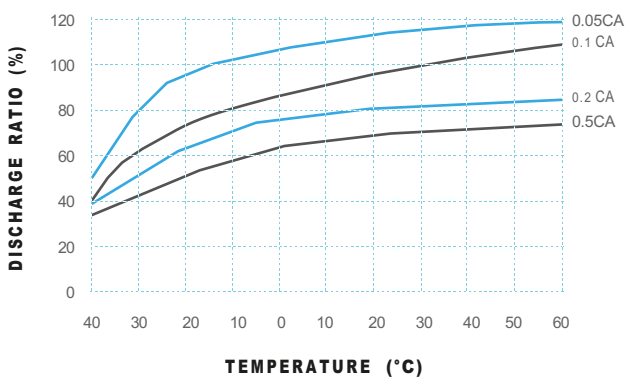
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



6-CNFT-170 12V/170Ah

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).



[https://
leadcrystaltechnologies.com](https://leadcrystaltechnologies.com)