FRONT TERMINAL · CNFT SERIES

6-CNFT-190



12V 190 Ah lead crystal battery

Built for telecom central offices and data center backup.

- 6,000+ cycles at 20% DoD
- Front terminal for easy rack access
- 190Ah in the 6-CNFT-170 case size
- Operates from -40°C to +65°C
- 99% recyclable, non-hazardous

NOMINAL VOLTAGE	RATED CAPACITY	DIMENSIONS	WEIGHT
12 V	**190** Ah	**546 × 125 × 320** mm	**51** kg
6 cells	10 h rate	L × W × total H	approximately

TERMINAL	MAX DISCHARGE	INTERNAL RESISTANCE	CHARGE VOLTAGE
F8	**1900** A	**≤ 6.0** mΩ	**13.5 to 13.6** V
standard	for 5 seconds	fully charged, 25 °C	float · cycle 14.4 to 14.7V

01 Specification

Manufacturer's data at 25 °C unless stated

ELECTRICAL

Nominal voltage	**12V** 6 × 2V cells
Rated capacity	**190 Ah** 10 hour rate
Chemistry	**Lead crystal** SiO_2 electrolyte, valve regulated
Internal resistance	**≤ 6.0 mΩ** fully charged, 25 °C
Max discharge current	**1900 A (5 s)** 25 °C

CAPACITY AT 25 °C

120 h rate	**216 Ah** at 1.8 A
20 h rate	**200 Ah** at 10 A
10 h rate	**190 Ah** at 19 A

DIMENSIONS AND WEIGHT

Length	**546 mm** 21.50 in
Width	**125 mm** 4.92 in
Height	**320 mm** 12.60 in
Total height	**320 mm** top of terminal · 12.60 in
Weight	**51 kg** approx. 112.4 lb
Terminal	**F8** standard

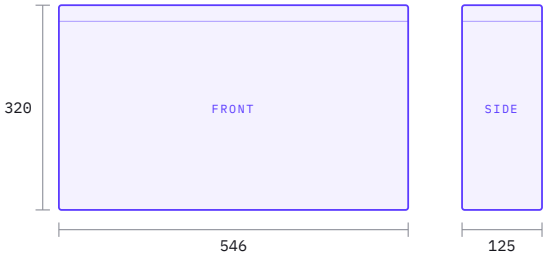
SELF-DISCHARGE AT 25 °C

After 3 months	**95%** capacity remaining
After 6 months	**85%** capacity remaining
After 12 months	**80%** capacity remaining

CHARGING · CONSTANT VOLTAGE

Cycle use	**14.4 to 14.7V** at 25 °C, initial current up to 36 A
Float / standby	**13.5 to 13.6V** at 25 °C

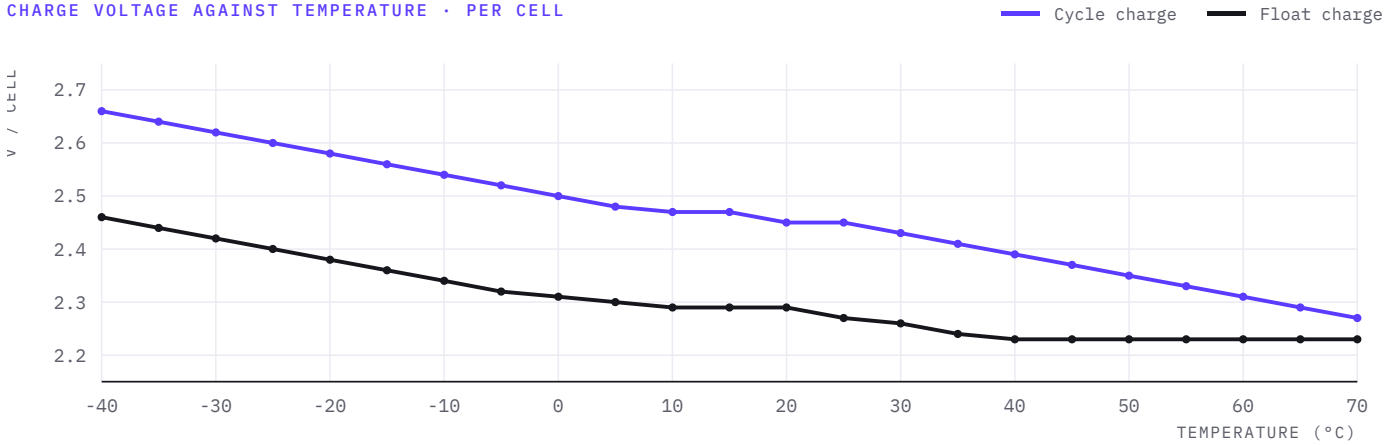
CASE, TO SCALE · MM



END VOLTAGE BY DISCHARGE CURRENT

0.05C or less, or intermittent	**11.4 V**
0.05C, or close to it	**11.1 V**
0.1C, or close to it	**10.8 V**
0.2C, or close to it	**10.5 V**
From 0.2C to 0.5C	**10.2 V**
From 0.5C to 1C	**9.6 V**
From 1C to 3C	**9.0 V**
Current in excess of 3C	**7.8 V**

CHARGE VOLTAGE AGAINST TEMPERATURE · PER CELL



°C	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Cycle	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	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

Volts per cell. Multiply by 6 for the 12V battery (at 25 °C: 14.70 V cycle, 13.62 V float).

02 Discharge performance

Manufacturer's data at 25 °C

Constant current discharge

AMPERES · BY END VOLTAGE PER CELL AND DURATION

END V PER CELL	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	697	369	223	163	131	75.0	54.5	42.7	36.4	31.0	23.6	19.7	16.5	10.7	8.78
1.67V	648	357	220	161	131	74.7	53.5	42.5	35.9	30.8	23.6	19.4	16.5	10.7	8.74
1.70V	641	351	217	159	130	74.0	53.2	42.3	35.4	30.4	23.5	19.4	16.4	10.7	8.73
1.75V	588	340	215	158	127	72.6	52.9	41.7	35.0	30.2	23.4	19.2	16.3	10.6	8.72
1.80V	527	318	206	154	124	71.5	52.7	41.6	34.6	29.9	23.3	19.0	16.3	10.3	8.70
1.83V	504	292	203	148	119	70.8	50.6	39.9	33.8	28.8	22.8	18.2	15.6	10.2	8.59
1.85V	472	283	190	143	115	68.0	49.3	39.3	32.9	27.8	22.5	18.01	15.37	10.05	8.51

Constant power discharge

WATTS PER CELL · BY END VOLTAGE PER CELL AND DURATION

END V PER CELL	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	1104	614	395	288	232	134	98.1	77.7	65.6	56.4	43.5	36.0	30.3	20.2	16.5
1.67V	1051	604	379	286	231	134	96.9	77.6	65.6	56.3	43.5	35.9	30.3	20.2	16.5
1.70V	1044	600	378	286	230	133	96.3	77.3	64.6	55.9	43.2	35.6	30.0	20.1	16.5
1.75V	973	593	377	286	229	132	95.3	77.2	64.4	55.4	43.0	35.3	30.0	20.1	16.4
1.80V	893	563	371	281	228	132	94.0	77.0	64.0	55.4	42.9	35.2	30.0	19.6	16.4
1.83V	861	517	368	273	218	131	92.5	74.4	63.3	53.7	42.9	34.1	29.4	19.4	16.3
1.85V	798	506	342	262	212	128	91.0	73.4	61.5	52.6	41.2	33.8	28.9	19.1	16.2

WHY LEAD CRYSTAL

Performance

Discharges deeper and cycles more often, in extreme heat and cold too, and recovers to full rated capacity again and again for a longer service life.

Technology

Micro-porous absorbent glass mat, high-purity lead calcium selenium plates and an SiO_2 electrolyte that sets into a white crystalline powder.

Cleaner and safer

Less acid, no cadmium and no antimony. Up to 99% recyclable and classed as non-hazardous goods for transport.

Where it works

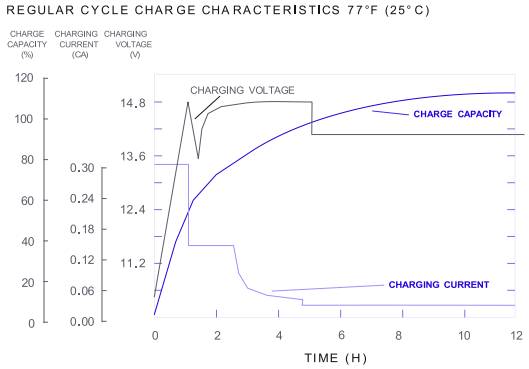
Telecoms, UPS, petrochemical and marine, defence, renewable energy, health care, manufacturing, transport and electric mobility.

ISO 9001 | ISO 14001 | CE | UL | IEC | 99% recyclable

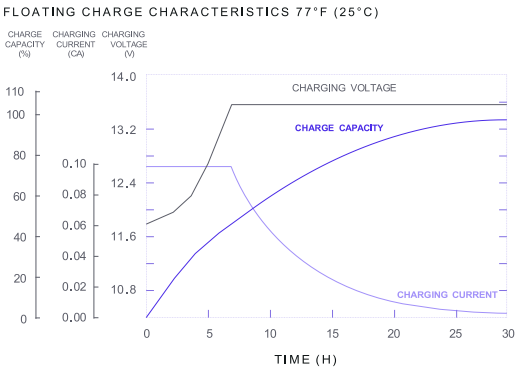
03 Performance curves

Manufacturer's test curves

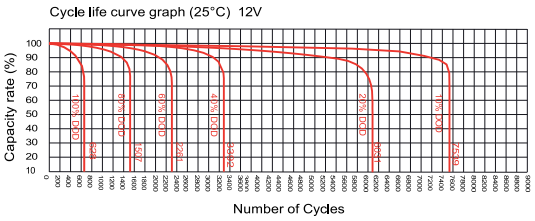
CYCLE CHARGE CHARACTERISTIC (25°C)

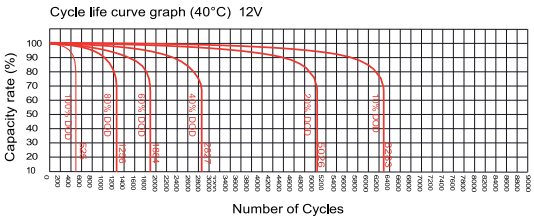


FLOATING CHARGE CHARACTERISTIC (25°C)

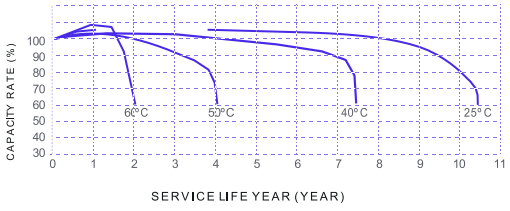


CYCLE LIFE CURVE GRAPH

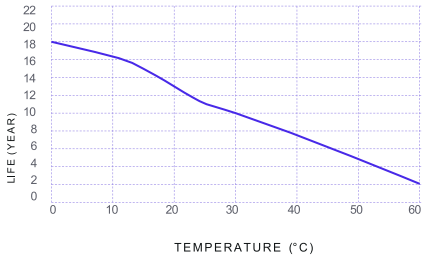




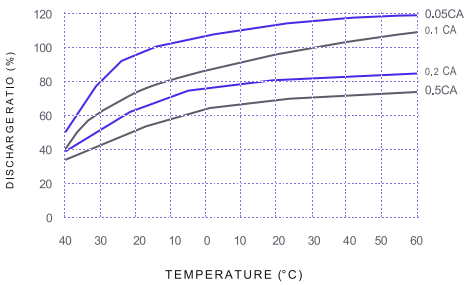
TEMPERATURE & FLOAT SERVICE LIFE



FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



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