

# 6-CNF Series

VRLA Battery For Energy Storage

6-CNF-150



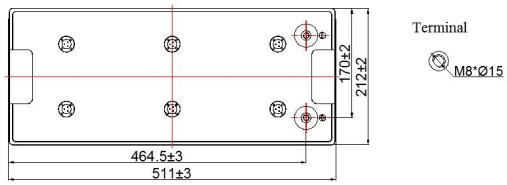
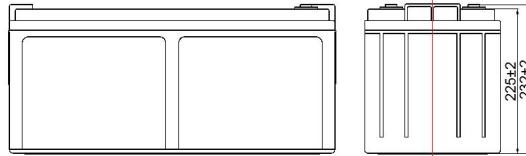
## Main Applications

- ▣ Renewable energy (wind & solar ) storage system
- ▣ Peak shifting of electrical power system
- ▣ Frequency regulation and load following service
- ▣ Smart-grid & micro-grid sites
- ▣ Off-grid & bad-grid sites

## Benefits

- ▣ Extra long life design, design life is 20 years
- ▣ Superior deep cycling performance
- ▣ Lifetime maintenance free, Low annual operating cost, reduced TCO
- ▣ High potential fuel savings when used with hybrid genset applications

## Dimensions



## Technical Parameters

Nominal Voltage	12 V
Capacity	150 Ah @ 10hr to 1.80V per cell @ 25°C (77°F)
Weight	59.3 kg (130.73 lbs)
Dimensions	Length: 511 mm Width: 212 mm Height: 225 mm Total height: 232 mm
Internal Resistance (full charged)	Approx. 3.1 mΩ @ 25°C (77°F)
Short- circuit Current	930 A(5sec)
Self Discharge @25°C(77°F)	Less than 4% after 30 days storage
Operating Temperature Range	Discharge: -40°C~50°C(-40°F~122°F) Charge: -20°C~45°C(-4°F~113°F) Storage:-20°C~40°C(-4°F~104°F)
Recommended Operating Temperature	15°C~25°C (59°F~77°F)
Maximum Charging Current	30 A
Charging Voltage @25°C(77°F)	Float: 2.25 V/cell, Temps coefficient -3 mV/°C Equalize: 2.35 V/cell Cycle:2.40 V/cell
Terminal	M8
Container Materials	ABS/ABS V0 (Optional)
Capacity Affected by Temperature(C <sub>10</sub> )	105% @ 40°C(104°F) 85% @ 0°C(32°F) 60% @ -20°C(-4°F)
Design Life @25°C(77°F)	20 years

## Attain Certificate

- ISO 9001
- ISO 14001
- GB/T 28001

## Technical Features

- ▣ Adopt lead- carbon technology
- ▣ Special gel electrolyte without flowing to avoid acid stratification and can prolong service life
- ▣ Excellent charging and discharging ability in low current
- ▣ Exquisite design for premium quality, high reliability and stability

# 6-CNF Series

VRLA Battery For Energy Storage  
6-CNF-150



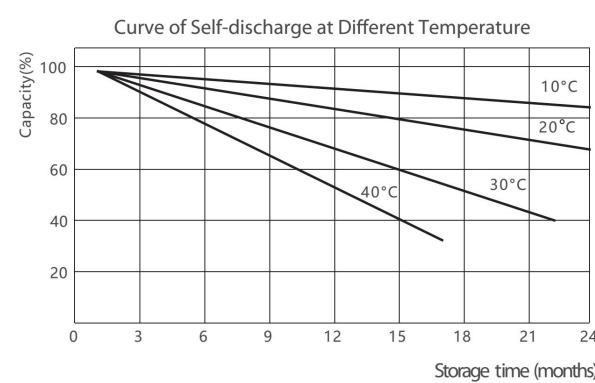
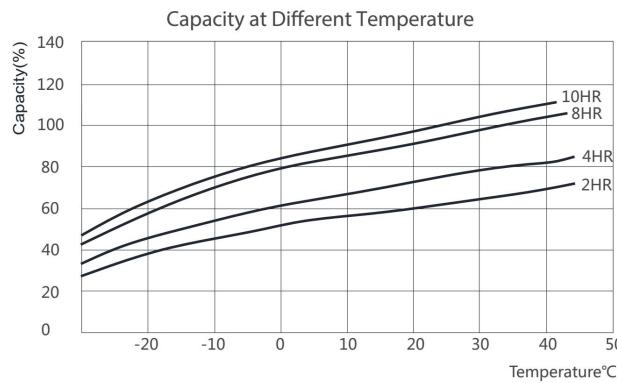
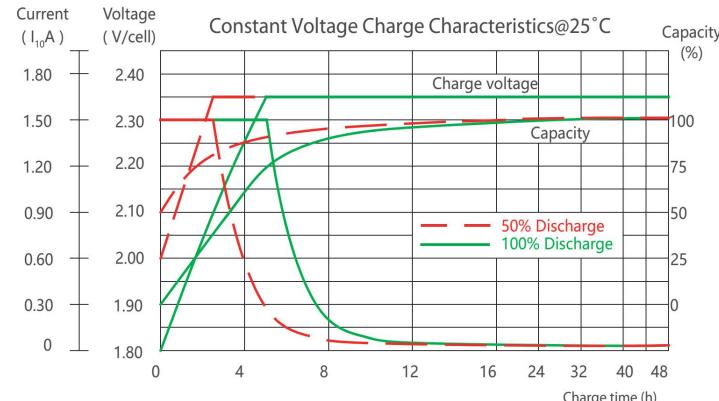
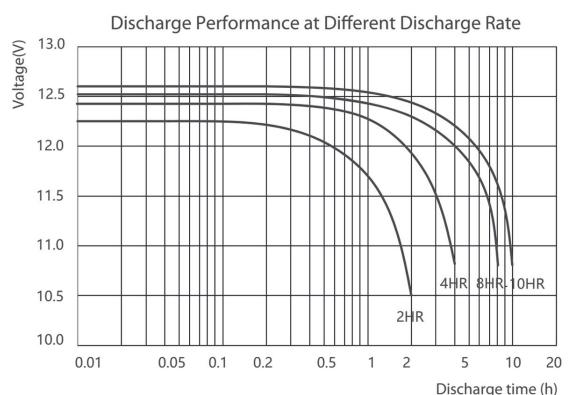
## Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

F.V/Time	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	197	126	81.8	49.0	36.6	29.4	24.6	21.7	17.6	14.9	7.85
1.80V/cell	214	134	84.1	50.9	37.9	30.2	25.4	22.3	18.0	15.3	8.01
1.75V/cell	224	141	87.2	52.4	38.8	30.9	25.9	22.7	18.3	15.5	8.12
1.70V/cell	234	146	89.9	53.8	39.6	31.5	26.4	23.0	18.6	15.7	8.21
1.67V/cell	239	151	92.1	54.9	40.3	32.0	26.7	23.3	18.8	15.8	8.29
1.60V/cell	249	157	94.1	56.0	40.9	32.4	27.0	23.6	19.0	15.9	8.35

## Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

F.V/Time	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	371	242	158	96.6	72.3	58.3	49.1	43.4	35.2	30.0	15.8
1.80V/cell	401	255	162	100	74.7	59.8	50.2	44.3	35.9	30.5	16.1
1.75V/cell	420	267	168	103	76.2	61.0	51.1	45.0	36.4	30.8	16.2
1.70V/cell	436	276	172	105	77.6	62.0	51.8	45.6	36.8	31.0	16.4
1.67V/cell	443	285	176	107	78.8	62.8	52.5	46.1	37.1	31.3	16.5
1.60V/cell	458	292	179	108	79.6	63.4	52.9	46.5	37.4	31.4	16.6

### Performance Curve



#### \*Declaration:

This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Contact CHINASHOTO for the latest information.