

# 6-CNF Series

VRLA Battery For Energy Storage

6-CNF-200



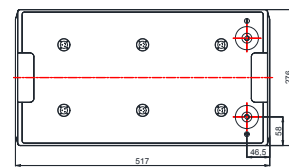
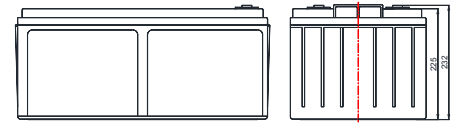
## Main Applications

- ▶ 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	200 Ah @ 10hr to 1.80V per cell @ 25°C (77°F)
Weight	80 kg (176.37 lbs)
Dimensions	Length: 517 mm Width: 276 mm Height: 225 mm Total height: 232 mm
Internal Resistance (full charged)	Approx. 2.7 mΩ @ 25°C(77°F)
Short- circuit Current	1240 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	40 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

- ISO9001
- ISO14001
- ISO18001

## 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

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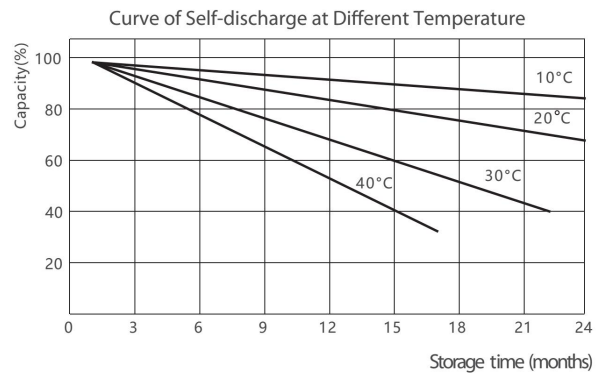
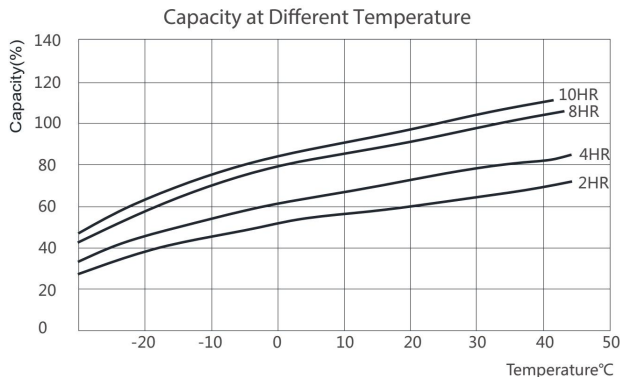
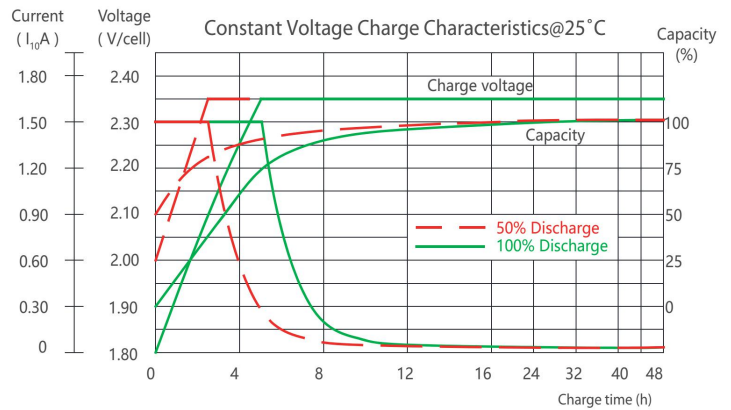
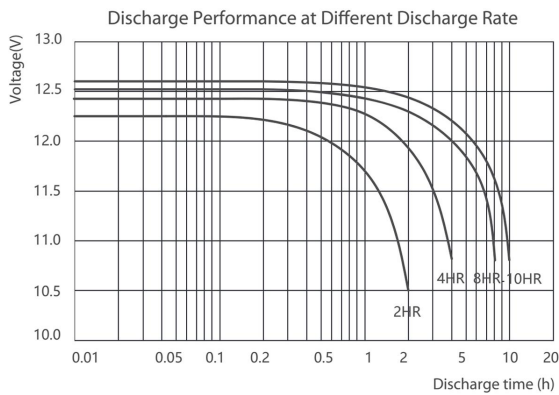
## Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

F.V/Time	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	20hr
1.85V/cell	249	150	109	65.3	48.7	39.2	32.9	29.0	23.4	19.9	10.5
1.80V/cell	271	159	112	67.9	50.5	40.3	33.7	29.7	23.9	20.3	10.7
1.75V/cell	284	167	116	70.0	51.7	41.2	34.4	30.3	24.4	20.6	10.8
1.70V/cell	297	175	120	71.7	52.8	42.0	35.0	30.8	24.7	20.8	10.9
1.67V/cell	301	181	123	73.2	53.7	42.7	35.6	31.2	25.0	21.0	11.0
1.60V/cell	315	187	125	74.5	54.5	43.3	36.1	31.5	25.3	21.2	11.1

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

F.V/Time	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	20hr
1.85V/cell	470	288	211	129	96.4	77.8	65.5	57.9	47.0	40.0	21.0
1.80V/cell	506	305	216	133	99.6	79.8	67.0	59.1	47.8	40.6	21.4
1.75V/cell	531	318	223	137	101	81.3	68.2	60.0	48.5	41.0	21.6
1.70V/cell	553	330	229	140	103	82.6	69.2	60.8	49.0	41.4	21.8
1.67V/cell	560	340	234	142	105	83.8	70.0	61.4	49.5	41.7	21.9
1.60V/cell	579	348	238	144	106	84.5	70.6	61.9	49.8	41.9	22.0

## 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.

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