

6-CNF Series

VRLA Battery For Energy Storage

6-CNF-50



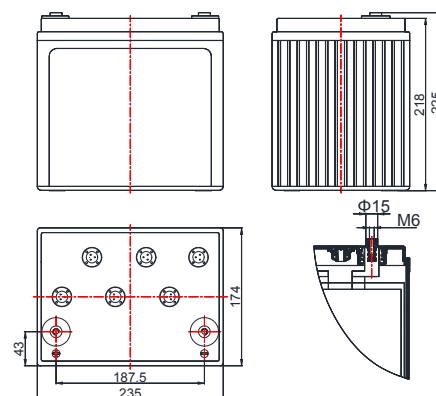
Main Applications

- 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	50 Ah @ 10hr to 1.80V per cell @ 25°C (77°F)
Weight	20 kg (44.09 lbs)
Dimensions	Length: 235 mm Width: 174 mm Height: 218 mm Total height: 225 mm
Internal Resistance (full charged)	Approx. 7.2 m Ω @ 25°C(77°F)
Short- circuit Current	310 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	10 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	M6
Container Materials	ABS/ABS V0 (Optional)
Capacity Affected by Temperature(C ₁₀)	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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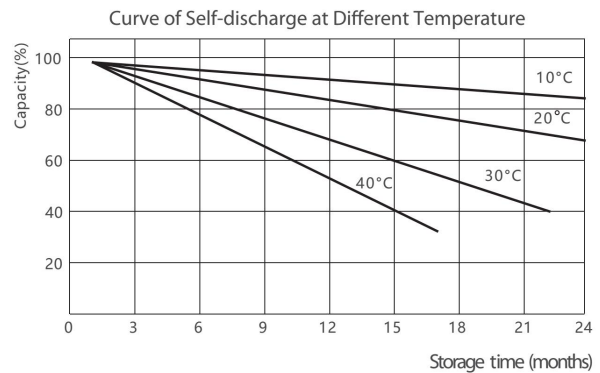
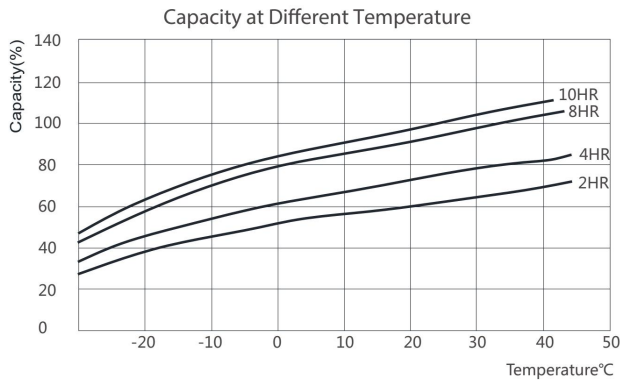
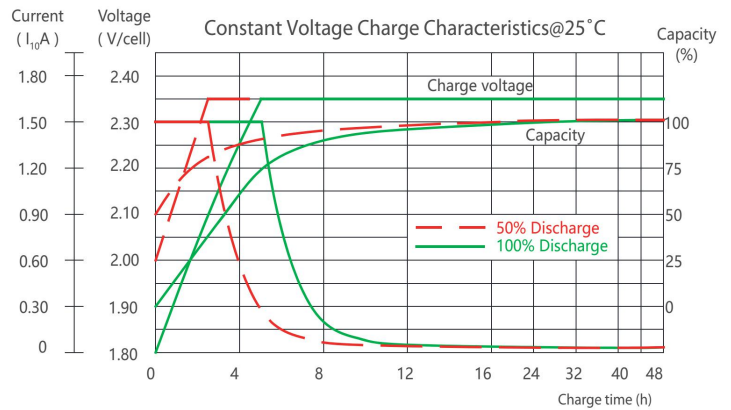
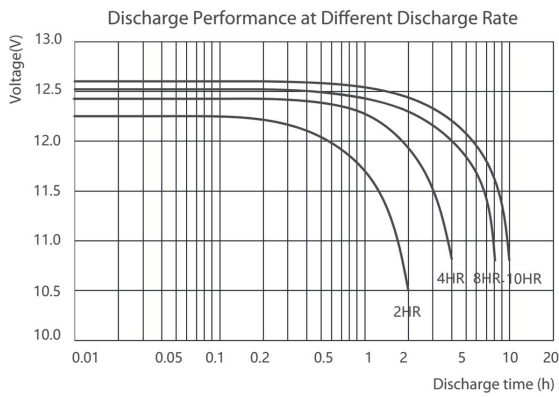
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

F.V/Time	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	20hr
1.85V/cell	69.0	44.3	27.3	16.4	12.2	9.8	8.23	7.25	5.86	4.99	2.62
1.80V/cell	75.1	47.0	28.1	17.0	12.6	10.1	8.46	7.42	5.99	5.09	2.68
1.75V/cell	78.9	49.3	29.1	17.5	12.9	10.3	8.63	7.56	6.10	5.15	2.71
1.70V/cell	82.7	51.4	29.9	18.0	13.2	10.5	8.78	7.70	6.18	5.21	2.74
1.67V/cell	83.5	53.2	30.7	18.4	13.4	10.6	8.94	7.77	6.26	5.26	2.77
1.60V/cell	87.5	55.0	31.4	18.7	13.6	10.8	9.01	7.85	6.31	5.30	2.78

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	130	84.3	52.7	32.1	24.0	19.4	16.4	14.4	11.7	10.0	5.26
1.80V/cell	140	89.8	54.0	33.3	24.9	20.0	16.8	14.7	11.9	10.1	5.34
1.75V/cell	147	93.7	55.8	34.2	25.5	20.4	17.0	14.9	12.1	10.2	5.40
1.70V/cell	153	96.8	57.4	35.0	25.9	20.7	17.3	15.3	12.3	10.3	5.44
1.67V/cell	155	100.0	58.6	35.7	26.3	21.0	17.5	15.4	12.4	10.4	5.48
1.60V/cell	160	102.5	59.5	36.2	26.6	21.1	17.7	15.5	12.5	10.5	5.50

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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