

Lead-Carbon Battery LLC-1000



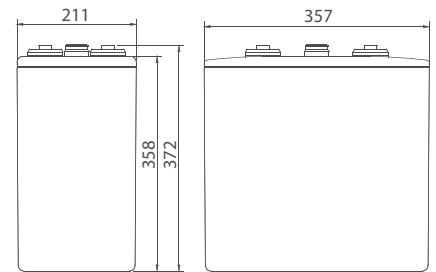
Main Applications

- ▣ 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 PSoC and deep cycling performance
- ▣ Excellent quick charge performance, reduce charging time by 30%
- ▣ High potential fuel savings when used with hybrid genset applications

Dimensions



Technical Parameters

Nominal Voltage	2 V
Capacity	1000 Ah @ 10hr to 1.80 V@ 25°C (77°F)
Weight	71.4 kg (157.4 lbs)
Dimensions	Length: 357 mm (14.06 in) Width: 211 mm (8.31 in) Height: 358 mm (14.09 in) Total height: 372 mm (14.65 in)
Internal Resistance (full charged)	0.23 mΩ
Short-circuit Current	9100 A
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)
Recommended Charging Current	150 A
Maximum Charging Current	300 A
Charging Voltage @25°C(77°F)	Float: 2.23 V/cell Equalize: 2.35 V/cell
Terminal	M8
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

Certification

- IEC 61427
- IEC 60896
- UL
- CE

Technical Features

- ▣ Adopt lead- carbon capacitance technology, reduce the cathode sulphation, ideal for PSoC cycle application and can deliver 4~5 times better cyclic life compared with normal VRLA
- ▣ Better charge acceptability and faster recharge performance
- ▣ Exquisite design for premium quality, high reliability and stability

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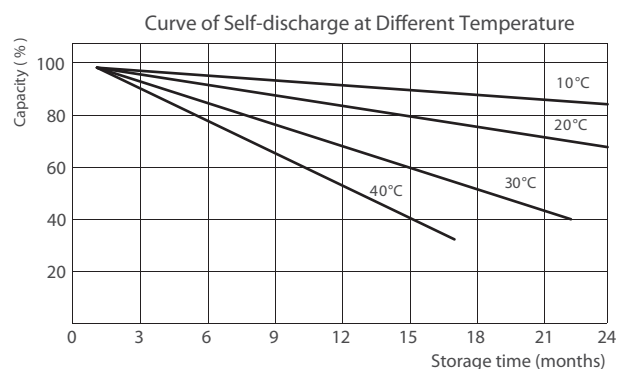
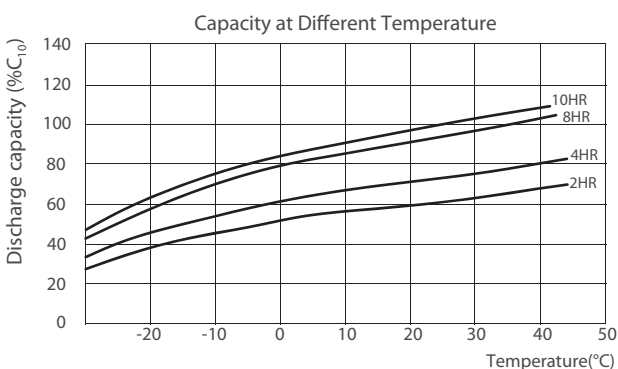
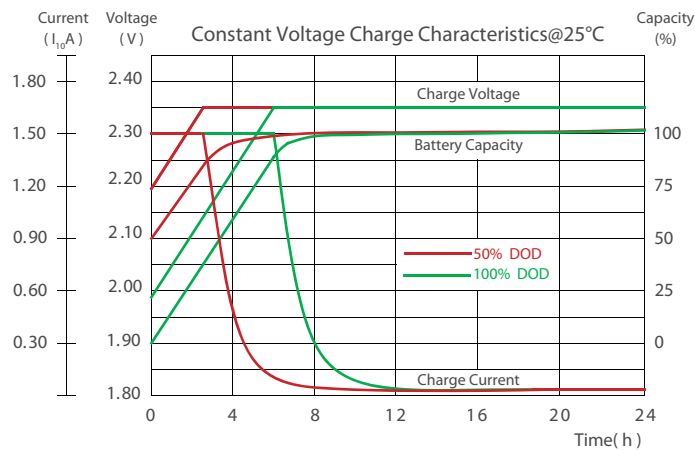
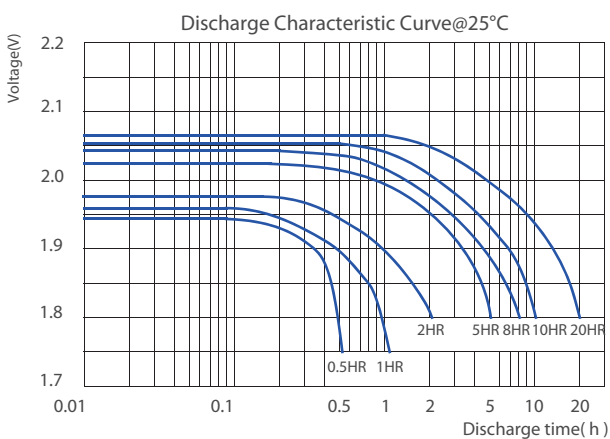
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

F.V/Time	15min	30min	1hr	3hr	5hr	8hr	10hr	20hr	48hr
1.75V	1256	842	560	261	181	128	106	57.8	24.6
1.80V	1086	790	540	253	177	125	104	56.8	24.2
1.85V	955	704	488	239	171	120	101	54.8	23.4
1.90V	744	586	422	206	144	102	84	48.6	22.8

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

F.V/Time	15min	30min	1hr	3hr	5hr	8hr	10hr	20hr	48hr
1.75V	2108	1666	1046	520	348	238	210	113.0	51.4
1.80V	2009	1452	1026	508	345	236	206	112.0	50.6
1.85V	1829	1356	1004	488	333	232	198	106.2	48.7
1.90V	1432	1096	870	453	316	214	184	96.4	45.6

Performance Curve



*Declaration:

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