

Extreme cyclic Battery

EXC-500



power the future



• 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
- All extreme environment (Off-grid & bad-grid sites)

• Benefits

- Extra long life design, design life is 25 years, help user reduce greatly operating cost
- Ultra-high cycling performance in both PSoC and deep cycling applications
- Super quick charge performance, reduce charging time by 50%
- More cost effective than nearest equivalent when used in energy storage system

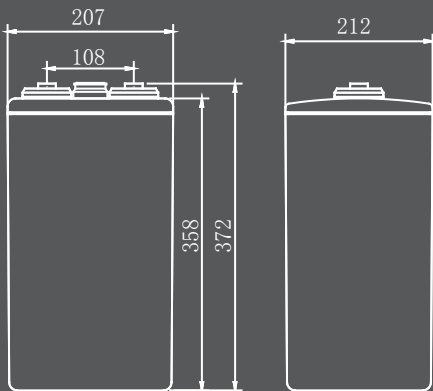
• Technical Features

- Comply with GB/T 22473、BS EN61427-1: 2013、IEC61427-2: 2015 standards, etc
- Adopt lead carbon technology, reduce the cathode sulphation, ideal for PSoC cycle application and can deliver 7~8 times better cyclic life compared with normal VRLA
- Exceptional fast charge acceptability
- Distinctive design for premium quality, high reliability and stability

• Technical Parameters

Normal Voltage	2V
Capacity	500 Ah @10hr to 1.80V per cell @ 25°C(77°F)
Weight	39.4 kg (86.9 lbs)
Dimensions	Length: 212 mm (8.35 in) Width: 207 mm (8.15 in) Height: 358 mm (14.09 in) Total height: 372 mm (14.65 in)
Internal Resistance (full charged)	0.25mΩ (According to IEC 60896-21)
Short- circuit current	8030A (According to IEC 60896-21)
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 ~ 50°C(-4°F ~ 122°F) Storage: -20°C ~ 40°C(-4°F ~ 104°F)
Recommended Operating Temperature	15°C ~ 25°C(59°F ~ 77°F)
Recommended Charging Current	100A
Charging Voltage @25°C(77°F)	2.30~2.35 V/cell
Terminal	M8
Capacity Affected by Temperature(C ₁₀)	105 % @ 40°C 90 % @ 0°C 40 % @ -20°C
Design life @25°C(77°F)	25 years

• Dimensions :



• Compliant standards :

- ★ GB/T 22473-2008
- ★ BS EN 61427-1: 2013
- ★ IEC 61427-2: 2015
- ★ IEC 60896-21/22

• Attain certificate :

- ☑ ISO9001
(NO.03009Q10083R2M)
- ☑ ISO14001
(NO.03010E10145R0M)
- ☑ GB/T28001
(NO.03010S10141 R0M)

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

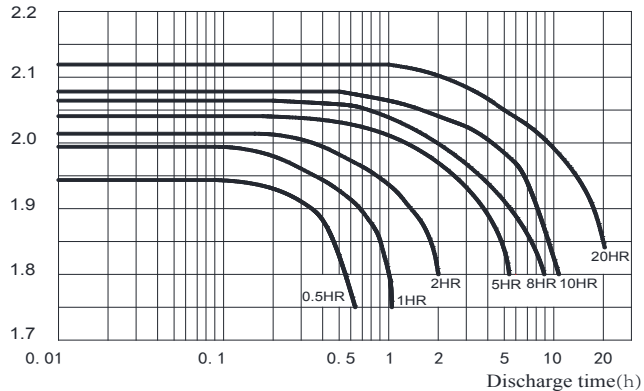
F.V/Time	15min	30min	1hr	3hr	5hr	8hr	10hr	20hr	48hr
1.75V	714.0	453.6	303.5	139.7	96.7	67.7	56.5	30.3	12.9
1.80V	584.9	425.3	283.5	135.5	94.5	66.4	55.1	29.8	12.7
1.85V	514.5	379.1	256.2	128.1	91.2	64.5	53.7	28.8	12.3
1.90V	437.9	325.5	226.8	119.7	87.8	62.1	51.9	28.1	12.0

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

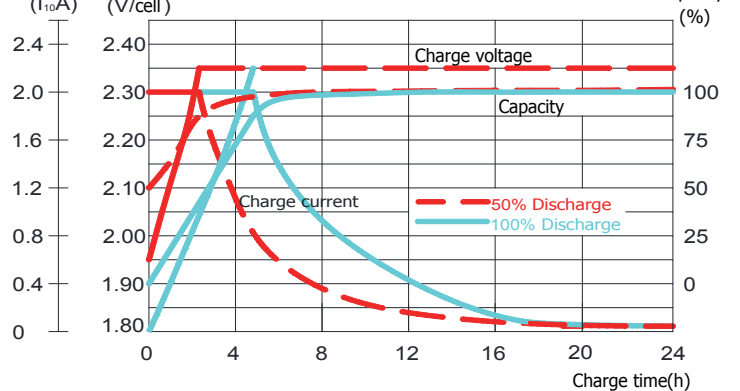
F.V/Time	15min	30min	1hr	3hr	5hr	8hr	10hr	20hr	48hr
1.75V	1135	904	611	286	189	132	110	63.5	27.0
1.80V	1082	872	597	276	184	128	108	62.3	26.5
1.85V	985	775	543	261	177	124	104	59.9	25.6
1.90V	856	654	468	243	172	116	97	58.0	24.7

● Performance curve :

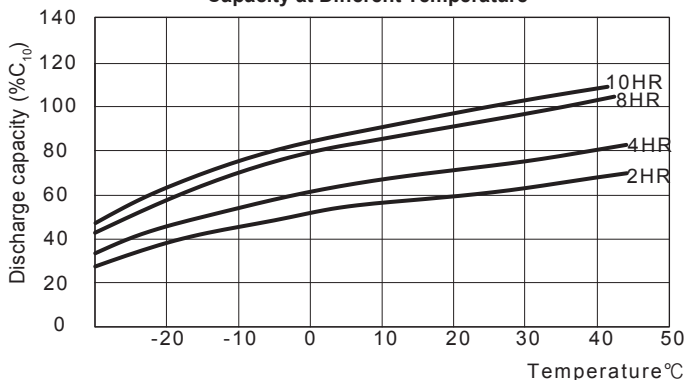
Upo (V) **Discharge Performance at Different Discharge Rate@25°C**



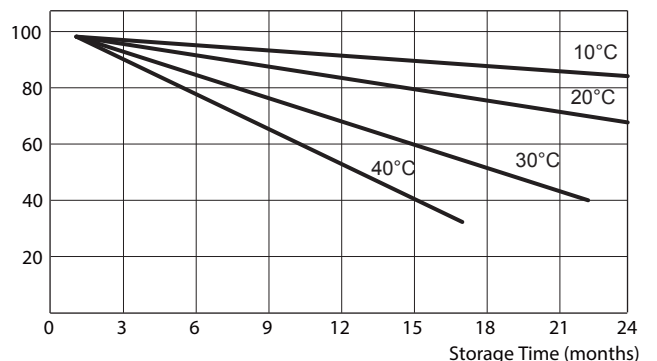
Current (I₁₀A) Voltage (V/cell) **Constant Voltage Charge Characteristics@25°C** Capacity (%)



Capacity at Different Temperature



Capacity(%) **Curve of Self-discharge at Different Temperature**



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