

# Extreme cyclic Battery

**EXC-600**



*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 15 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

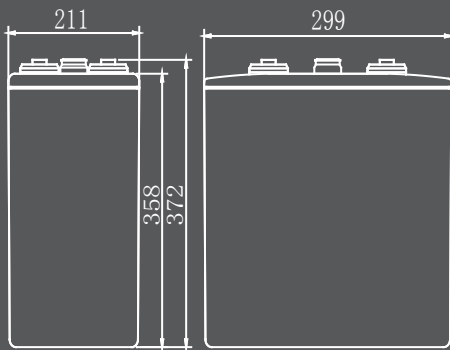
## • Technical Features

- 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   | 600 Ah @10hr to 1.80V per cell @ 25°C(77°F)  |
| Weight   | 56.6 kg (124.8 lbs)  |
| Dimensions   | Length: 299 mm (11.77 in)<br>Width: 211 mm (8.31 in)<br>Height: 358 mm (14.09 in)<br>Total height: 372 mm (14.65 in) |
| Internal Resistance (full charged)                 | 0.24mΩ (According to IEC 60896-21)   |
| Short- circuit current                             | 8300A (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)<br>Charge: -20°C ~ 50°C(-4°F ~ 122°F)<br>Storage: -20°C ~ 40°C(-4°F ~ 104°F)  |
| Recommended Operating Temperature                  | 15°C ~ 25°C(59°F ~ 77°F)   |
| Recommended Charging Current                       | 120A   |
| Charging Voltage @25°C(77°F)                       | 2.30~2.35 V/cell   |
| Terminal   | M8   |
| Capacity Affected by Temperature(C <sub>10</sub> ) | 105 % @ 40°C<br>90 % @ 0°C<br>40 % @ -20°C   |
| Design life @25°C(77°F)                            | 15 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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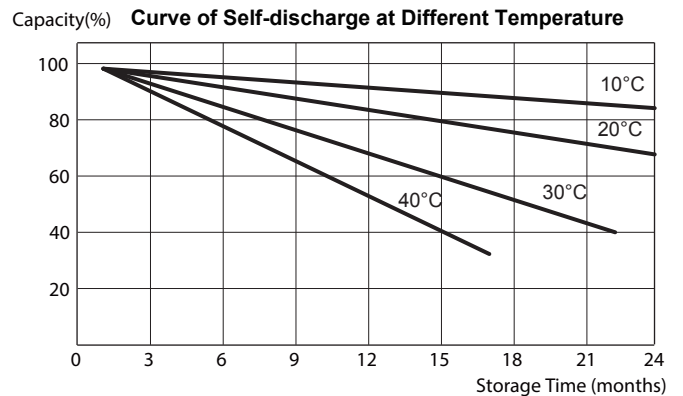
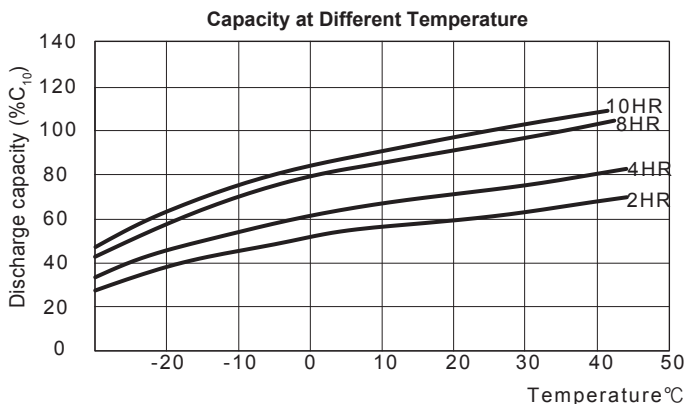
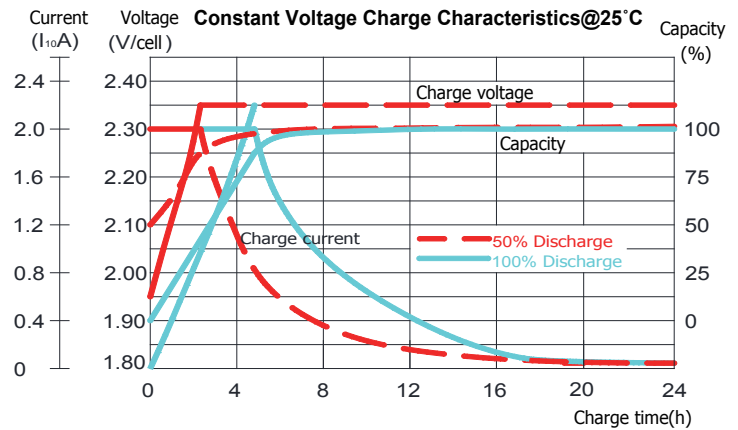
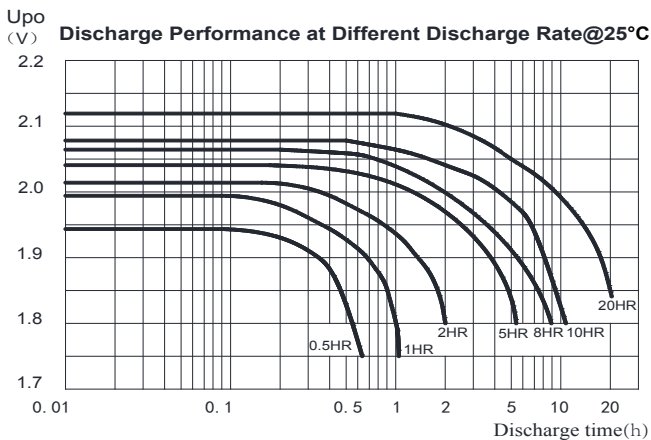
### ● Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

| F.V/Time | 15min | 30min | 1hr   | 3hr   | 5hr   | 8hr  | 10hr | 20hr | 48hr |
|----------|-------|-------|-------|-------|-------|------|------|------|------|
| 1.75V    | 823.8 | 525.4 | 357.0 | 165.9 | 116.0 | 81.3 | 67.8 | 36.4 | 15.5 |
| 1.80V    | 674.8 | 492.6 | 333.5 | 161.0 | 113.4 | 79.6 | 66.2 | 35.8 | 15.2 |
| 1.85V    | 593.7 | 439.0 | 301.5 | 152.3 | 109.5 | 77.4 | 64.4 | 34.5 | 14.7 |
| 1.90V    | 505.3 | 377.1 | 266.8 | 142.2 | 105.3 | 74.4 | 62.3 | 33.8 | 14.4 |

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

| F.V/Time | 15min | 30min | 1hr | 3hr | 5hr | 8hr | 10hr | 20hr | 48hr |
|----------|-------|-------|-----|-----|-----|-----|------|------|------|
| 1.75V    | 1309  | 1047  | 719 | 339 | 227 | 159 | 132  | 76.1 | 32.4 |
| 1.80V    | 1247  | 1009  | 702 | 328 | 221 | 153 | 130  | 74.8 | 31.9 |
| 1.85V    | 1136  | 898   | 638 | 311 | 213 | 149 | 125  | 71.8 | 30.7 |
| 1.90V    | 987   | 758   | 551 | 288 | 207 | 139 | 116  | 69.6 | 29.6 |

### ● 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.

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