**BeStar Technologies Inc.**
Address: 761 N. 17th Street Unit 4, St. Charles, IL 60174
Tel : 847-261-2850 E-mail : sales@bestartech.com Web : www.bestartech.com

Document Number : 1110-43
Revision : A3
Total Pages : 5
Prepare by : Loki, Lo
Date : 9 October, 2018

SENER Brand Power Product
www.jlsener.com

Document Type : Specification
Product Type : Lithium Manganese Dioxide ($LiMnO_2$) Cylindrical Battery
Ordering Code : SCR2/876
Part Number : CR2
Cell UL Number : MH61795

| | | |
|---|---|---|
| A1 - New issue created by Ting Lok, Ngan on 22 Nov., 2012 | | |
| A2 - Updated section 7 by Ting Lok, Ngan on 19 Mar., 2013 | | |
| A3 - Updated section 4 by Loki, Lo on 9 Oct., 2018 | | |
| | | |

## 1. Purpose and Scope

This document contains both general requirements, qualification requirements, and those specific electrical, mechanical requirements for this part.

## 2. Description

Ø15.4 x 26.7 mm Lithium Manganese Dioxide (LiMnO2) cylindrical battery with Viridian brand sleeve, blister card packing, 3 pcs per card, RoHS compliant.

## 3. Application

Computers and Peripherals, Portable Equipment, etc.

## 4. Component Requirement

### 4.1. General Requirement

| | | |
|---|---|---|
| **4.1.1.** | Cell Size | : Ø15.3 x 26.7 mm |
| **4.1.2.** | Weight | : Approx. 11g |
| **4.1.3.** | Operating Temperature | : -40°C to +60°C |
| **4.1.4.** | Storage Temperature | : -20°C to +40°C |

### 4.2. Electrical Requirement

| | | |
|---|---|---|
| **4.2.1.** | Nominal Voltage | : 3V |
| **4.2.2.** | Nominal Capacity | : 1000mAh |
| **4.2.3.** | Standard Discharge Current | : 20mA |
| **4.2.4.** | Maximum Continuous Discharge Current | : 1000mA |

### 4.3. Standard Characteristics

**4.3.1.** Temperature Characteristics (20mA)

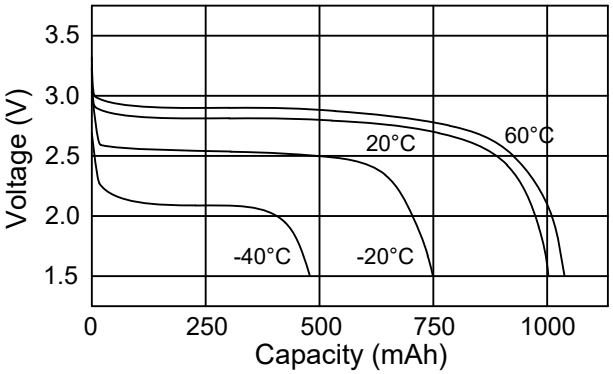


**Figure 1. Temperature Characteristics (20mA)**

**4.3.2.** High Drain Discharge Characteristics

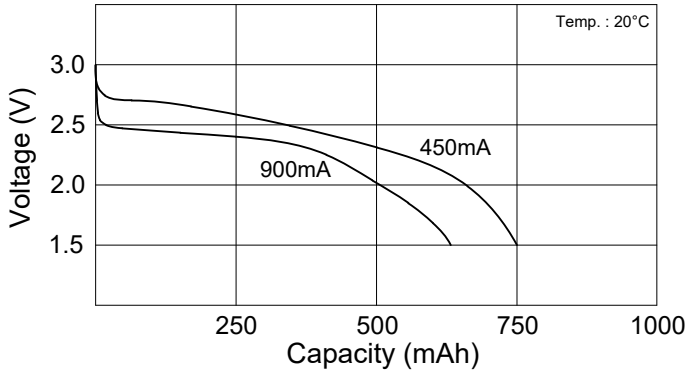


**Figure 2. High Drain Discharge Characteristics**

**4.3.3.** Pulse Discharge Characteristics

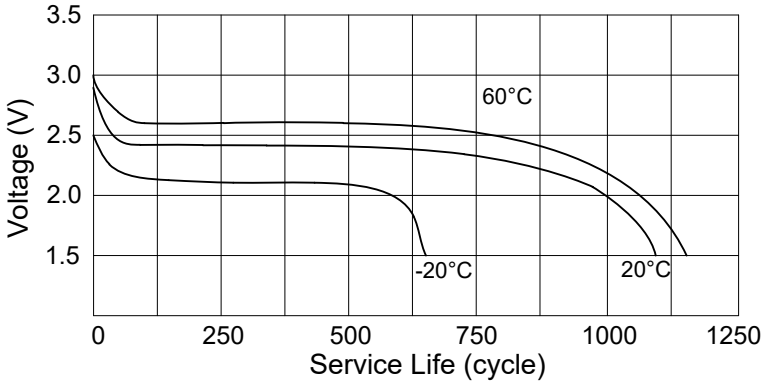


**Figure 3. Pulse Discharge Characteristics**

**4.3.4.** Discharge Characteristics

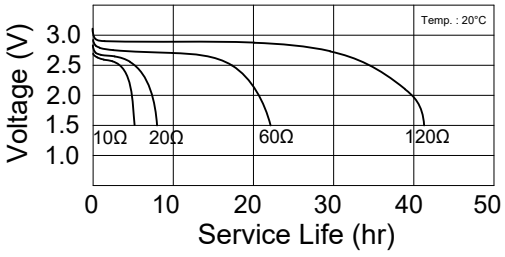


**Figure 4. Dischage Characteristics**

## 5. Test and Measurement

**5.1. Outer Dimensions** : Samples are measured by caliper with tolerance <0.25%.

**5.2. Weight** : Samples are measured by balance with sensitivity > 100mg.

**5.3. Appearance** : No deformation or tarnish should be found by visual inspection.

**5.4. Open Circuit Voltage** : Samples are measured by voltmeter with internal impedance >1MΩ and tolerance <0.25%.

**5.5. Operating Duration** : Operating duration is counted from nominal voltage to specific cut-off voltage by standard discharge current.

**5.6. Battery Impedance** : Apply 1KHz, 0.1mA sine wave to samples and measure it's impedance value.

**5.7. Vibration Resistance** : Secure samples. Vibrated 1000rpm with 2mm peak amplitude in 3 directions (x, y and z). The test duration is 30 minutes per plane.

**5.8. Leakage Resistance** : Perform heat cycle test according to MIL-STD-202E-106D standard. No leakage should be found after 10 cycles test.

## 6. Caution

**6.1.** A battery shall not be stored at temperatures in excess of 45°C. Storage at less than 30°C is recommended. Storage at less than -40°C can deform the plastic parts and may cause a leakage. To prevent self-discharge caused by corrosion, or decrease of insulation, humidity during storage shall be less than 70%.

**6.2.** The battery has an explosion resistant construction. But the following cautions should be taken because combustible materials such as lithium metal and organic electrolyte are contained in the battery.
* Do not short circuit.
* Do not dispose in fire.
* Do not charge.
* Do not disassemble.

**6.3.** Keep away from heat source or flame.

**6.4.** The battery should not be washed by ultrasonic wave washer.

**6.5.** Do not mix fresh batteries with used or different battery types.

## 7. Mechanical Layout

Unit : mm
Tolerance : Linear XX.X = ±0.3
XX.XX = ±0.05
Angular = ±0.25°
(unless otherwise specified)

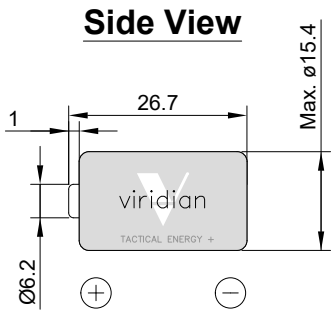


**Figure 4. SCR2/876 Mechanical Layout (Bare cell)**

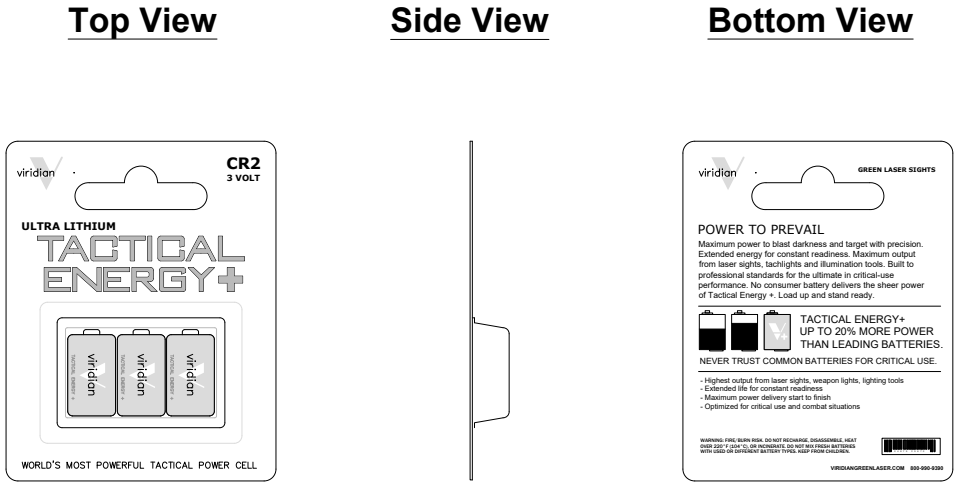


**Figure 5. SCR2/876 card layout**