**Technical Data Coin-type Manganese Dioxide Lithium Battery** 

**Type: CR2016** 

Made in China

2022.Ver1.0

### TOSHIBA LIFESTYLE PRODUCTS & SERVICES CORPORATION

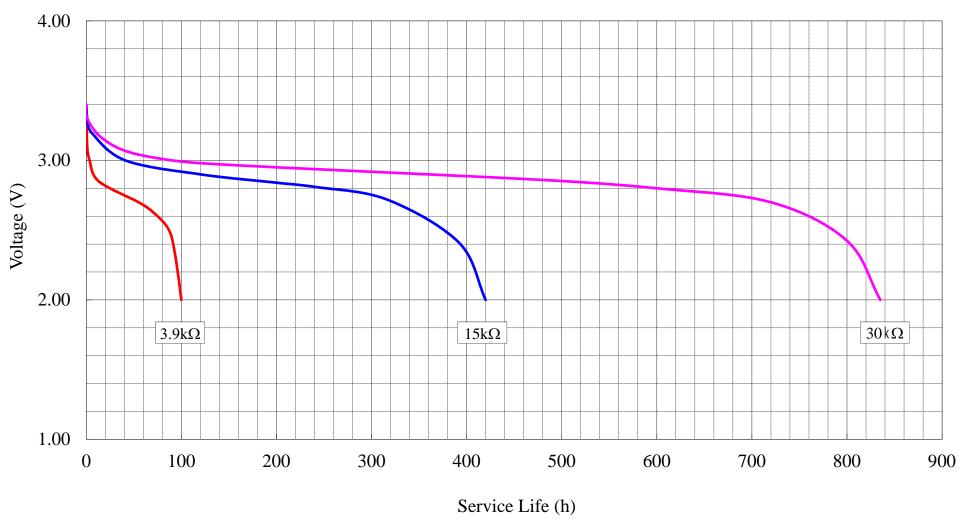
## **Ratings**

| Battery system Item           |                | Coin-type Manganese Dioxide Lithium Battery                                  |  |  |
|-------------------------------|----------------|--|--|--|
| Battery type                  |                | CR2016   |  |  |
| Nominal Voltage               |                | 3.0V   |  |  |
| Standard Capacity [Condition] |                | 85 mAh [on continuous discharge under 30k load to 2.0V end-point at 20deg.C] |  |  |
| Terminals                     | Cap Terminals  | SUS + Ni plate   |  |  |
| Terminais                     | Base Terminals | SUS + Ni plate   |  |  |
| Outer                         | Diameter       | φ20.0(0/-0.3)mm  |  |  |
| dimensions                    | Overall height | 1.6(0/-0.2)mm  |  |  |
| Usable temperature range      |                | 20 65 de a C   |  |  |
| Storage temperature range     |                | -20 ~ 65deg.C  |  |  |

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### **CR2016 Discharge Characteristics**

Test condition: cotinuous discharge, Initial, 20deg.C

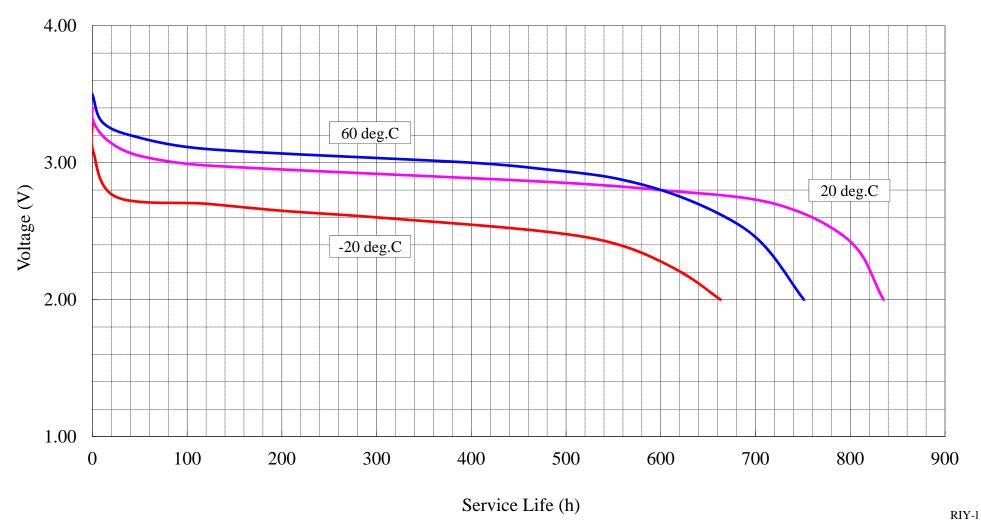


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### **CR2016 Discharge Characteristics**

Test condition:  $30k\Omega$  continuous discharge, Initial

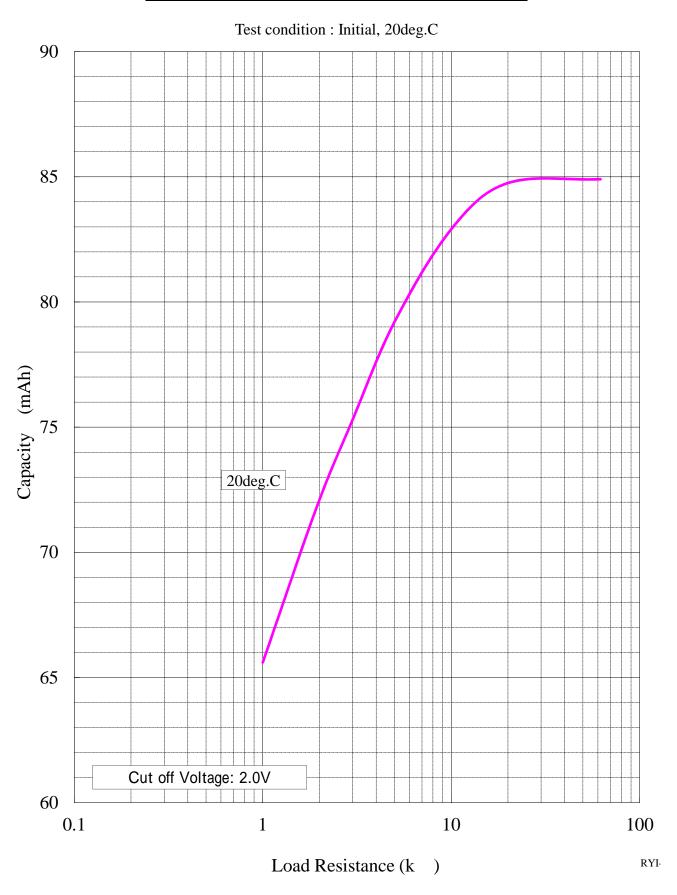


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#### **TOSHIBA**

### **CR2016 Load Resistance vs Capacity**



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### **CR2016 Safety Evaluation Test**

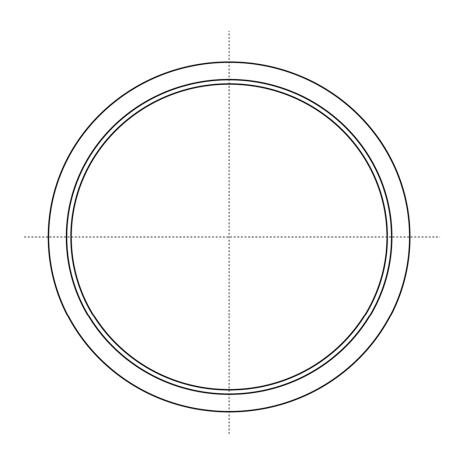
|                    | n | Conditions   | Requirements  |  |
|--------------------|---|--|---|--|
| Vibration test     | 5 | Amplitude: 1.0mm Frequency: 10 to 55 to 10Hz Sweep: 1minute Period: 2h per each direction of X and Y axes, 4h in total | Open-circuit voltage is to be kept same as initial value.  No abnormal appearance and no substandard dimensions are to be observed. |  |
| Weighing test      | 5 | Weight of 19.8N(2kgf) is laid for 1 hour and 9.8N(1kgf) for 24 hours respectively on all over negative side of cells.  | Open-circuit voltage is to be kept same as initial value.  No abnormal appearance and no substandard dimensions are to be observed. |  |
| Drop test          | 5 | Number of drops: 10 times Height: 75cm<br>Floor: Concrete Direction: Free  | Open-circuit voltage is to be kept same as initial value.  No abnormal appearance and no substandard dimensions are to be observed. |  |
| Heat test          | 5 | Cells are kept stored for 24hrs. Temperature: 80+/-2deg.C Humidity: 70%RH or less.                                     | Open-circuit voltage is to be kept same as initial value.  No abnormal appearance and no substandard dimensions are to be observed. |  |
| Temperature cycle  | 5 | Temperature: -10deg.C 60deg.C (4h/Cycle, 6cycle/day,20Day)   | Open-circuit voltage is to be kept same as initial value.  No abnormal appearance and no substandard dimensions are to be observed. |  |
| Short-circuit test | 5 | Cells are Short-circuited for 48 hours.  | No burst, No fire   |  |

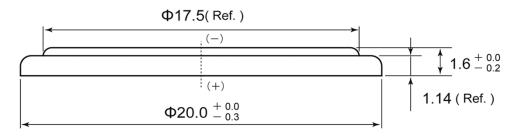
# **CR2016 Leakage Performance**

|                             | Test items   | Electrolyte Leakage (%) |        |        |        |  |
|-----------------------------|--|-------------------------|--------|--------|--------|--|
| Test condition              | Storage period   | 20days                  | 40days | 60days | 90days |  |
| Storage at high temperature | 45deg.C-70%RH  | 0                       | 0      | 0      | 0      |  |
| and high humidity           | 60deg.C-90%RH  | 0                       | 0      | ŀ      | -      |  |
| Temperature cycle           | Temperature: -10deg.C 60deg.C (4h/Cycle, 6cycle/day,20Day) | 0                       | -      | -      | -      |  |

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# **CR2016 Outline Drawing**





Unit: mm

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