Lithium Ion Rechargeable Battery
Technical Information

<table>
<thead>
<tr>
<th>Model Number</th>
<th>US18650VC7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Type</td>
<td>Cylindrical</td>
</tr>
<tr>
<td>Cell Name</td>
<td>US18650VC7</td>
</tr>
<tr>
<td>Sony Code</td>
<td>49941610</td>
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Sony Energy Devices Corporation
Device Solutions Business Group / Sony Corporation
1. General

1.1 Name and Code
1.1.1 Model Number : US18650VC7
1.1.2 Cell Name : US18650VC7
1.1.3 Sony Code : 49941610

1.2 Cell Shape and Weight
1.2.1 Cell Shape : Cylindrical
1.2.2 Size (with plastic tube) : Diameter 18.50mm max
Length 65.25mm max
1.2.3 Weight : 47.2g Average (TBD)

1.3 Safety Regulation
: Sony acquire UL1642
: Sony IEC62133 2nd edition
: Sony will acquire Korean regulation
: Sony will acquire Taiwan Commodity Inspection Act(CNS 15364)

2. Performance

<table>
<thead>
<tr>
<th>Nominal Capacity (0.2ItA discharge)</th>
<th>3500mAh 12.60Wh</th>
<th>average capacity 3.6V (average discharge voltage) at room temperature, 2.0V cut off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Capacity (0.2ItA discharge)</td>
<td>3400mAh 12.24Wh</td>
<td>minimum capacity at room temperature, 2.0V cut off</td>
</tr>
<tr>
<td>Capacity at 0.5ItA</td>
<td>3230mAh</td>
<td>average capacity at room temperature, 2.5V cut off</td>
</tr>
<tr>
<td>Capacity at 5A</td>
<td>2720mAh</td>
<td>average capacity at room temperature, 2.5V cut off</td>
</tr>
<tr>
<td>Nominal Voltage</td>
<td>3.6V</td>
<td></td>
</tr>
<tr>
<td>Internal Impedance</td>
<td>23mΩ Typ.</td>
<td>measured by AC1kHz</td>
</tr>
<tr>
<td>Cycle Performance</td>
<td>70% Min. of Initial capacity at 300 cycles</td>
<td>Charge at 1.0A, Cut off current 100mA, Discharge at 5A, 2.5V cut off, at room temperature.</td>
</tr>
</tbody>
</table>

* Standard Charge Condition

  Charge Method : constant current constant voltage
  Charge Up Voltage : 4.2± 0.05V
  Charge Current : 1.0A
  Charge Time : 5.5h
  Ambient Temperature : 23°C
Charge Characteristics (US18650VC7)

US18650VC7 (3400mAh)
Charge: 25°C, 4.2V, 1.0A (CC/CV), 5.5h

- Voltage
- Capacity
- Current
Discharge Load Characteristics (US18650VC7)

US18650VC7(3400mAh)
Charge: 23°C, 4.2V, 1.0A(CC/CV), 5.5h
Discharge: 23°C, 680mA, 2.0Vcutoff
           1750mA/ 3400mA/ 5000mA / 8000mA, 2.5Vcutoff
Discharge Load Characteristics (US18650VC7)

US18650VC7 (3400mAh)
Charge: 23°C, 4.2V, 1.0A (CC/CV), 5.5h
Discharge: 25°C, 0.68A, 2.0V cutoff
1.75A/3.4A/5.0A/8.0A, 2.5V cutoff

Graph showing voltage and temperature over capacity for different discharge currents.
Cycle Life Performance (US18650VC7)

Discharge Capacity [mAh] vs Cycle number

US18650VC7 (3400mAh)
Charge: 23°C, 4.2V, 1.0A (CC/CV), 100mA cutoff
Discharge: 23°C, 5A, 2.5V cutoff, 0.5h rest
Temperature Dependence of Discharge Capacity (US18650VC7)

Discharge Capacity [mAh]

Discharge Current [mA]

US18650VC7 (3400mAh)
Charge: 23°C, 4.2V, 1.0A (CC/CV), 5.5h
Discharge: 5A, 2.5V cutoff
Temperature Dependence of Discharge Capacity (US18650VC7)

US18650VC7 (3400mAh)
Charge: 23°C, 4.2V, 1.0A (CC/CV), 5.5h
Discharge: 5A, 2.5V cutoff

Voltage

Temperature

Cell Voltage [V]

Cell Temperature, [°C]

Capacity [mAh]
Dimension with Plastic Tube (US18650VC7)

- Diameter of Top: $\phi 18.35$ (0.14)
- Diameter of Body: $\phi 18.35$ (0.15)
- Diameter of venting area: $\phi 10.4$
- Length: 65.05 (0.20)

CAN (Bottom side)