Pin-type Lithium-ion Battery

Dec., 2019
Panasonic Corporation
Pin-type Lithium-ion Battery, suitable for small devices

- Wireless Earphones
- Smart Glasses
- Stylus Pen
- Hearing Aids
- Wristband Devices
Features

1) Super small and slim battery realizes not only stylish designs but also high output.

2) A high-strength stainless exterior case provides excellent safety and reliability.

3) Rapid charging makes your portable devices more user-friendly.
1) Super small and slim, but high output

☑ Provides stylish designs for your products, as well as Bluetooth low energy, vibration and other functions which needs big discharging current.

※Image chart

<table>
<thead>
<tr>
<th>General Li-ion</th>
<th>CG-320A</th>
</tr>
</thead>
<tbody>
<tr>
<td>18650 size</td>
<td></td>
</tr>
<tr>
<td>Diameter : 3.65mm</td>
<td>Height : 20mm</td>
</tr>
</tbody>
</table>

CG-320A Pulse discharging result with 150mA (10C)

Test Conditions:

C: 7.5mA (0.5C)/4.35V - 0.8mA (0.05C) cut (CC/CV)
D: Pulse current 150mA (10C) for 0.5s in every hour,
Base current 0.1mA - 3.0V cut
Temperature: 20°C

Voltage when discharging with base current
Voltage when discharging with pulse current
2) High-strength stainless case, high safety and high reliability

- No swelling, no explosion, no fire.
- Certified by IEC62133/UL1642.

Test example:

- Swelling check after 1,000 times cycle test
- Nail penetration test
- Impact test
3) Rapid charging, more user-friendly

✓ 3C charging realizes 80% charging in 20 minutes. (CG-425A/435A only)
Manufacturing technology

- Positive electrode (Lithium cobalt-oxide)
- Negative electrode (Graphite)
- Separator

- ✔️ Highly skilled battery design technology
- ✔️ Highly precise manufacturing technology
- ✔️ Highly quality control
# Specification

<table>
<thead>
<tr>
<th>Part Number</th>
<th>CG-320A</th>
<th>CG-420A (Under Development)</th>
<th>CG-425A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (Max.)</td>
<td>3.65mm</td>
<td>4.7mm</td>
<td>4.7mm</td>
</tr>
<tr>
<td>Height (Max.)</td>
<td>20mm</td>
<td>20mm</td>
<td>25mm</td>
</tr>
<tr>
<td>Weight* (Approx.)</td>
<td>0.5g</td>
<td>0.8g</td>
<td>1.0g</td>
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<tr>
<td>Typical Capacity</td>
<td>15mAh</td>
<td>23mAh</td>
<td>32mAh</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>15mAh</td>
<td>22mAh</td>
<td>30mAh</td>
</tr>
<tr>
<td>Nominal Voltage</td>
<td>3.8V</td>
<td></td>
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</tr>
<tr>
<td>Maximum Charging Voltage</td>
<td></td>
<td>4.35V</td>
<td></td>
</tr>
<tr>
<td>Maximum Charging Current</td>
<td>11.2mA (0.75C)</td>
<td></td>
<td>90.0mA (3C)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Charge</td>
<td>0°C ~ 60°C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discharge</td>
<td>-20°C ~ 60°C</td>
<td></td>
</tr>
<tr>
<td>Certifications</td>
<td></td>
<td>IEC62133, UL1642</td>
<td></td>
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</tbody>
</table>

Without tabs
Pin-type Li-ion battery will make your product more attractive.

Key Benefits

- Small & Slim
- Stylish design
- High safety & reliability
- Rapid charging
- Available for Bluetooth low energy, vibration and other functions
- Long product life time

2. The battery will be shipped with tabs. Please ask a Panasonic sales person when tab customization is needed.

3. In order to prevent accidental ingestion of the battery, it must be inaccessible to the individual user / customer.

Standard Terminal Types

Through-hole type  Surface mount type

All models have stainless steel tab with tin (Sn) plating.
Any Questions?
Please feel free to ask a Panasonic sales person.

Panasonic Pin-type Lithium-ion Battery
https://eu.industrial.panasonic.com/products/batteries-energy-products/secondary-batteries-rechargeable-batteries/lithium-ion-pin-type