ilika | stereax
solid state batteries for the connected world

Application Note Summary: Solid State Batteries for Medtech

MedTech is evolving

The healthcare sector, or Medtech, is changing to embrace the interconnectivity of the Internet of Things for more proactive patient health management. This has created a demand for remote patient monitoring, with devices needed to monitor and report vital data to central healthcare providers. IoT Healthcare sector revenues are forecast to be around $409.9Bn by 2022 (Grand Review Research, 2016). Improved interaction with patients through smart technology requires medical devices that:

- Improve patient experience by remote monitoring without need to visit place of care.

- Help patients to self-serve by being able to use more sophisticated devices to look after their condition better themselves.

- Improve reaction time for changes in conditions, plus the distribution and optimisation of medicines.

- Providing larger amounts of information (Big Data) to improve knowledge and treatment of conditions.

0.7 mm

Figure 1: Graphic representation of M50 Stereax® solid state battery.

Ilika's Stereax® M50 solid state battery advantages for MedTech

Ilika has designed the first solid state battery dedicated to MedTech's needs for a miniature size, long life & safe battery:

- Ultra-thin profile: Stereax® M50 batteries can be as thin as 250 μm, allowing them to be stacked in order to increase energy density.

- Footprint: 10.75 mm x 3.75 mm. Various footprint shapes including custom sizes are available.

- High energy density (50 μAh).

- Low self-discharge (nA).

- Potential to withstand autoclave temperatures.

- Potential for biocompatibility.

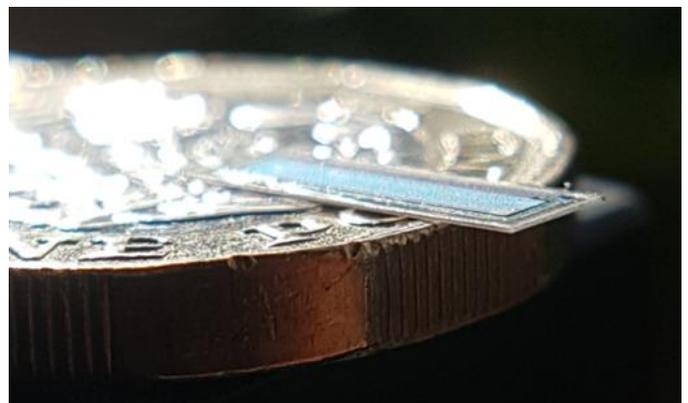- No lithium metal at any stage of cycling.

Figure 2: Photograph of M50 Stereax® solid state battery

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