



ULTRA-MINIATURIZED MICROBATTERY FOR MEDICAL DEVICES

LET'S POWER DIGITAL HEALTH TOGETHER! SAFE, RECHARGEABLE, HIGH ENERGY DENSITY MICROBATTERY TECHNOLOGY

WHAT IS INJECTPOWER?

Medical implants present a particular challenge when it comes to power. As implants get smaller, it becomes more difficult to ensure sufficient energy density for long-term operation.

Injectpower solves this problem with an innovative, safe, rechargeable, high energy density, reliable solid-state microbattery technology. It offers unprecedented energy density on an ultra-thin substrate.

The technology is the result of more than sixteen years of research and development at CEA-Leti, a major international research organization located in France.

Power management is optimized to extend battery life, enabling the kind of continuous operation required for medical devices. Testing has confirmed a 1,000-cycle, ten-year lifespan.

DEMO @ CES 2022

We will present the world's first and smallest highenergy-density microbatteries developed specifically for implantable medical sensors. Specifically, we will demo our solution on intraocular and intracranial pressure measurement for glaucoma and chronic neurological conditions, respectively.







Injectpower is the world's smallest and most integrated rechargeable battery.

Around 80 million people worldwide are concerned by Glaucoma, and it is a leading cause of blindness.

Injectpower is a key enabler of remote intraocular pressure monitoring, part of the solution to tackle this global health challenge.

Injectpower will also find applications in neurosurgery and the treatment of cardiovascular disease, enabling real-time continuous monitoring to improve our understanding and treatment of chronic illness.

Our ultra-thin microbattery can make implantable medical devices (neurostimulation, cardiology, etc.) smaller and self-powering.





APPLICATIONS

- Intraocular pressure monitoring
- Neurosurgery and cardiovascular disease

KEY FEATURES

- Market estimated at more than **\$1.5 billion** by **2026**
- Semiconductor-like manufacturing processes support scaleup to annual volumes of more than 1 million units
- **1,000-cycle,** ten-year lifespan
- Energy density **10x** higher than similarly-sized commercial products
- 10x thinner

SCIENCE FOR A BETTER FUTURE

Injectpower offers a level of miniaturization and energy density compatible with the requirements of medical implants. By enabling custom medical implants for enhanced monitoring of chronic diseases like glaucoma, Injectpower has the capacity to change the lives of millions of patients.

Better eye pressure monitoring can help stabilize glaucoma patients and, ultimately, keep them from losing their vision. This innovation will provide unprecedented access to a wide range of patient data that will inform the prevention and treatment of disease and improve patients' quality of life.

>> WHAT'S NEXT?

Injectpower supplies a highly integrated microbattery to US-based medtech company Injectsense. The battery was developed specifically for iOP-Connect[™], an intraocular pressure monitoring device that addresses glaucoma therapy management needs.

Injectpower is now working on stacking microbatteries to augment the energy density of a given surface area.

INTERESTED IN THIS TECHNOLOGY?

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Injectpower is a CEA spinoff.