

MINIATURE SOLID STATE BATTERIES FOR SMART CARDIAC SENSORS



HEART FAILURE MANAGEMENT

Implanted devices such as loop recorders, mini-ECG or pulmonary pressure sensors are a recent advancement in heart failure management. They monitor potentially dangerous conditions such as atrial fibrillation; diagnose arrhythmias; alert to instances of atrial fibrillation or asystole, unexplained fainting, heart palpitations or unexplained stroke.

CONNECTED SENSORS

Wireless products connect the patient with connected care service. Constant flow of heart rhythm data combined with artificial intelligence algorithms automatically alert cardiologists when irregular heartbeats or abnormal data are detected to speed up treatment of the unbalanced rhythm.

PAIN POINTS FOR DESIGNERS

To provide sufficient amount of data, cardiac devices need to be turned on a high proportion of the time. To avoid low patient compliance, sensors should be autonomously powered by batteries but the battery needs to be small enough to enable implantation via-catheter or sub-cutaneously.

STEREAX SOLID STATE

BATTERIES

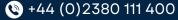
Stereax M300 is a rechargeable, miniature solid state battery with:

- 300 µAh
- 3.5 V
- 3 mA pulse current
- 1000 cycles
- 5.6 x 3.6 x 1.1 mm



PRODUCT DESIGN BENEFITS

- Millimetre-scale format, enable real miniaturisation, including catheterimplantation
- Rectangular form factor, fits easily on PCB
- High power, capable of powering most comms and therapies
- High cycle life, can be recharged numerous times
- Can be recharged wirelessly
- Rapid charging, improves patient compliance to charging at home



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