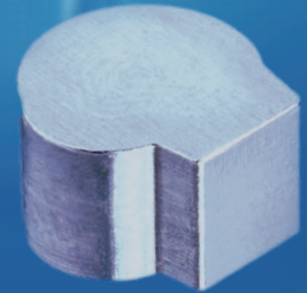


Batteries for Hearing Aid Devices



Compact battery cell

Hearing aid experts predict that rechargeable hearing aids will become as important as sound quality, battery performance and cosmetic or design aspects. The advantages of rechargeable batteries include: long life, the convenience of not having to constantly handle tiny button batteries, and safety aspects (e.g., if children and pets accidentally swallow them).

A particular challenge is the design of small-volume cells with high energy density that nevertheless meet high reliability and safety requirements. As early as 2001, Fraunhofer ISIT presented its first Li-ion cell developed specifically for use as a rechargeable energy source for hearing aids.

Twenty years later, the battery cells developed by Fraunhofer ISIT are optimally tailored to the needs of people with a very active lifestyle (e.g. easy handling, long battery life, common in-the-ear and behind-the-ear hearing aids).

Specifications

Nominal voltage [V] (@C/10)	3.6
Energy [mWh]	34,8
Capacity@0.1C [mAh]	11.0
Dimension and form factor	variable
Operating Time (in Use)	>16 h
Operation temperature	0 – 50°C
Nominal Power [mW]	1.7
Peak Power [mW]	>5

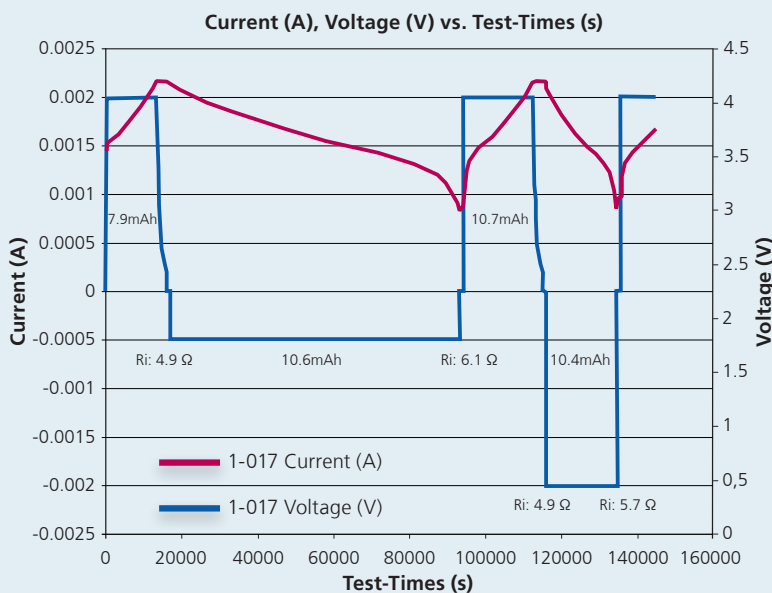
Cell chemistry

Cathode	NCA
Anode	Graphite
Electrolyte	EC/DMC/LiPF ₆ +Additives

Battery lifetime

Number cycles	> 1000
Calendar lifetime	5 years

Characteristics



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