

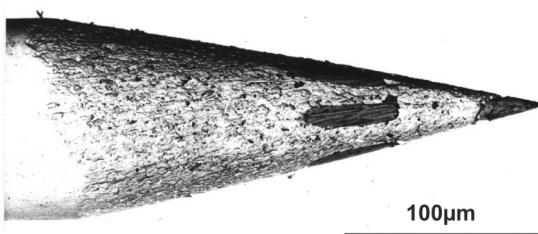


Thomas RECORDING GmbH

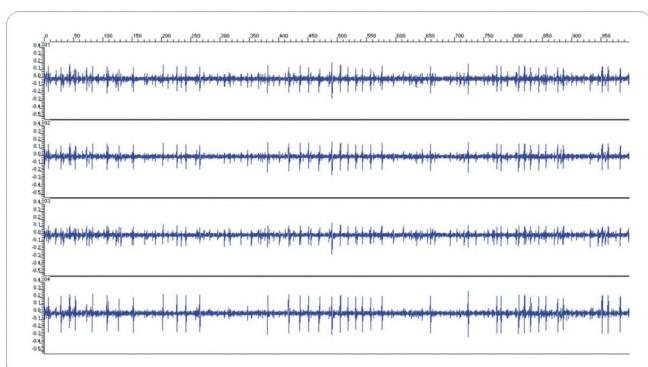
*„We have the solution!“*

## ***Thomas Multicore Fiber Microelectrodes***

### ***Tetrodes & Heptodes***



100µm



Made in  
Germany

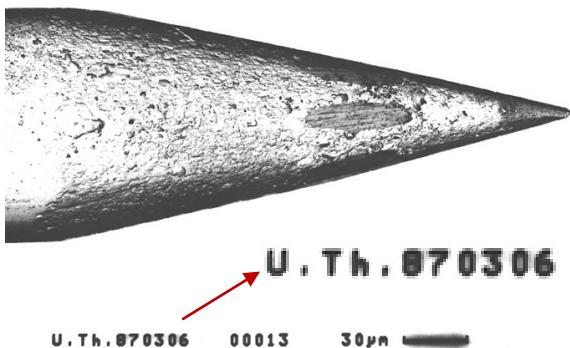
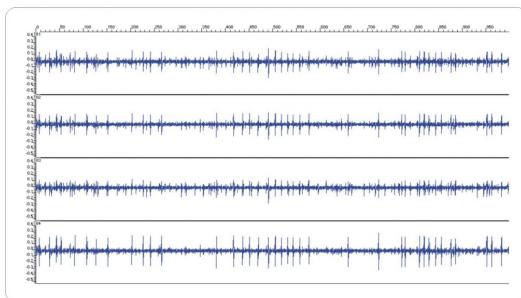
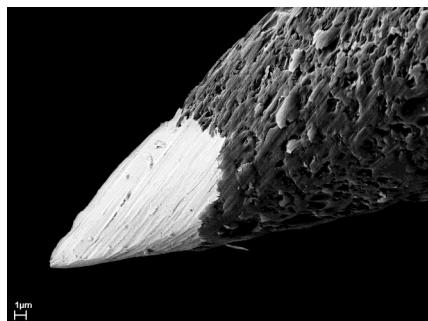
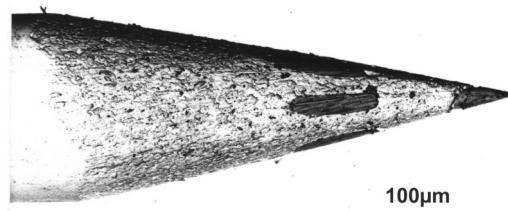
Certified  
ISO 9001



TÜV Rheinland®  
Precisely Right.

### Product Features

- ◆ **Material:**  
Quartzglass insulated Platinum/  
Tungsten
- ◆ **Tetrodes** (4 metal cores)
- ◆ **Heptodes** (7 metal cores)
- ◆ **Tetrode & Heptodes** with fiber  
diameters of 100µm
- ◆ **Unique material combination**
- ◆ **Biocompatible materials**
- ◆ Well suited for **acute** and also for  
**long term chronic recordings**
- ◆ **Very close electrode spacings** are  
possible (down to 80µm) when  
using Thomas microdrives
- ◆ **Very thin shafts** minimize tissue  
damage
- ◆ Suitable for **cortical** as well as  
**deep brain recordings**



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Germany

Certified  
ISO 9001  TÜV Rheinland®  
Precisely Right.

Rev. 1.0 / dated Nov. 22, 2011

# Thomas RECORDING GmbH

*„We have the solution!“*

## Advantages of Thomas Fiber Multielectrodes:

- The passage between the glass isolation of our heptodes & tetrodes and the metal cores is very smooth, this minimizes tissue damage
- Due to the geometrical shape of our fiber tetrodes & heptodes tissue is displaced radially during penetration, with little tissue compression
- Microgrooves, caused by the grinding process (see electron microscope photo on the left side, white area = metal), increases the effective tip area at a given tip volume. This results in a tip capacitance which is considerably higher than the tip capacitance of etched tips. This is one reason for their excellent signal-to-noise ratio and single-unit isolation.
- Our tetrodes & heptodes have a wide recording bandwidth and a low cut-off-frequency, so that both, spike potentials and (slow) local field potentials can be recorded from the same microelectrode (see picture on the left side for S/N ratio of Thomas tetrodes)
- Because of our precision manufacturing techniques the geometrical shape of the electrode tip can be made exactly and reproducibly according to specifications
- Thomas fiber electrodes do not bend in the brain. They move straight over distances of up to 40.000µm
- We have a **long tradition since 1987** in tetrode & heptode manufacture, see original scanning electron microscope photo on left side, dated March 6, 1987 made by Mr. Uwe Thomas (U.Th.)

We are looking forward to your request:

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