

EXAKT Sample Preparation Report - Thermistor Cuboids

With kindly authorisation of CERAUTO Ind. Com. LTDA. / Brasil

1. Task

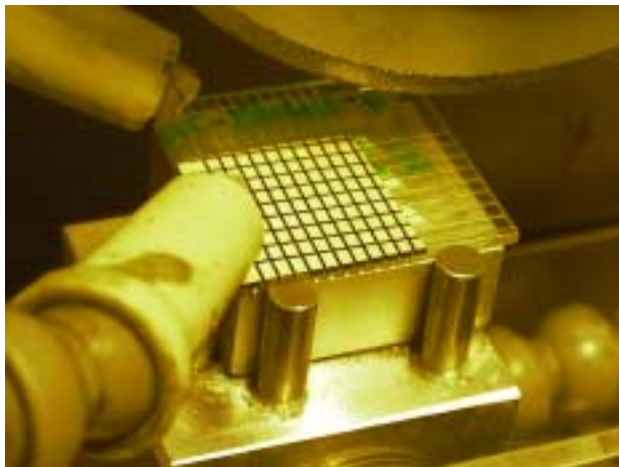
The task was to cut precise cuboids of thermistors (Ag-layered hard ceramic) from plates of approx. 20 (40) x 20 (40) mm (0,7 – 0,9mm thick).

The cuboids should have a measurement of 1,3 x 1,8mm (tolerance +/- 10 microns).

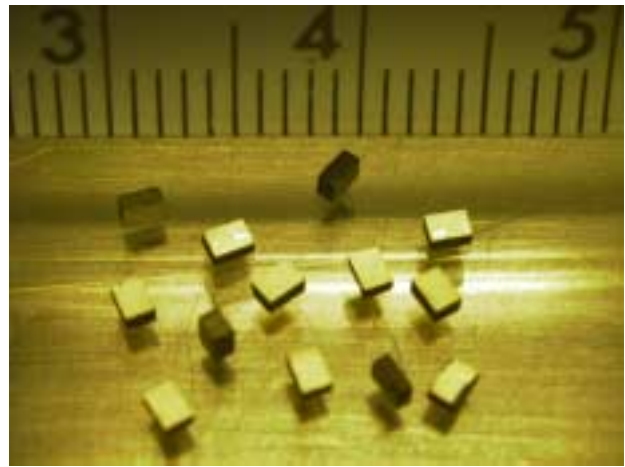
2. Used process

The cuboids were produced with the EXAKT 340 CP Rotary System. The EXAKT 340 CP Rotary System is a cutting system with a diamond layered cutting disk (75 .. 125 mm in diameter) that operates on the principle of minimising the contact between the cutting tool and the specimen (CP = Contact Point). This reduced contact allows the user to reduce the cutting force required to affect the cut and exercise more control over any negative impact to the specimen overall and material interfaces in particular. The EXAKT 340 CP provides a fully automated cutting process (except the rotation of the plate for 90°).

Picture 1:
Thermistor plate in EXAKT 340 CP Rotary system



Picture 2:
Thermistor cuboids 1,3mm x 1,8mm



3. Results

The production rate that could be achieved with the process was approx. 10000 cuboids a day (6..8 hours) using 28 plates of 40x 40 mm.

The process was not optimised at the stand of this preparation report.