



Hermetic Vacuum Packaging

Thermally Stabilized Ceramic Packages

INO is a world-class center of expertise in industrial applications for optics and photonics, as well as a leading technology developer and provider of MEMS and MOEMS technologies. We have the equipment and expertise to handle the entire microsystem development cycle, from the simulation, design, and fabrication of devices through to their packaging and characterization.

INO has developed a number of hermetic vacuum packaging technologies for MEMS devices based on metallic and ceramic headers with cavity pressure level less than 5 mTorr. Processes are performed in state-of-the-art semi-automated vacuum furnaces and systems that allow for activation of nonevaporable getters.

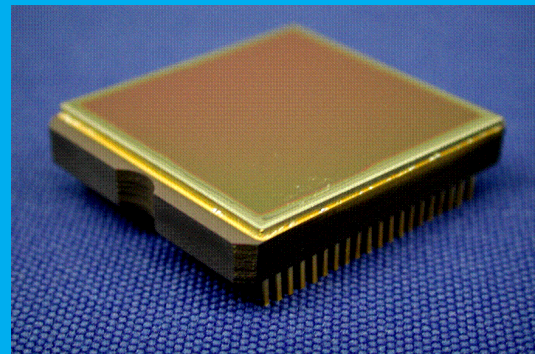
KEY APPLICATIONS

The vacuum ceramic packaging technology was originally developed for uncooled bolometric detectors. However, the package can accommodate other MEMS devices that require a vacuum environment down to 5 mTorr and a window.

INO's solid expertise in vacuum technology allows to adapt the vacuum sealing technology to specific device requirements. INO also offers short-series production.

ADVANTAGES

- Scalable and customizable platform: Good for R&D purposes
- Enough room to add a getter, a pressure sensor or a temperature sensor
- Flexible: possibility to put many chips in it
- Assembly under vacuum



Thermally Stabilized Ceramic Package

INO OFFERS

R&D CONTRACTS — PROTOTYPING — PREPRODUCTION —
SHORT-RUN PRODUCTION — TECHNOLOGY TRANSFERS



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Typical Specifications

CHARACTERISTICS	DESCRIPTION
PACKAGE	Ceramic 40 pin header
FOOTPRINT	External size; 30x26 mm ²
CAVITY	1,200 µL
THERMOELECTRIC COOLER	TEC Integrated
GETTER	Integrated H ₂ getter
PRESSURE	Below 10 mTorr
PROCESSING	Fluxless
PACKAGE RELIABILITY	Environmental testing Shock: MIL-STD-883 - 2002 Shock: MIL-STD-810-516 Vibration: MIL-STD-810-514

All specifications subject to change without notice

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