



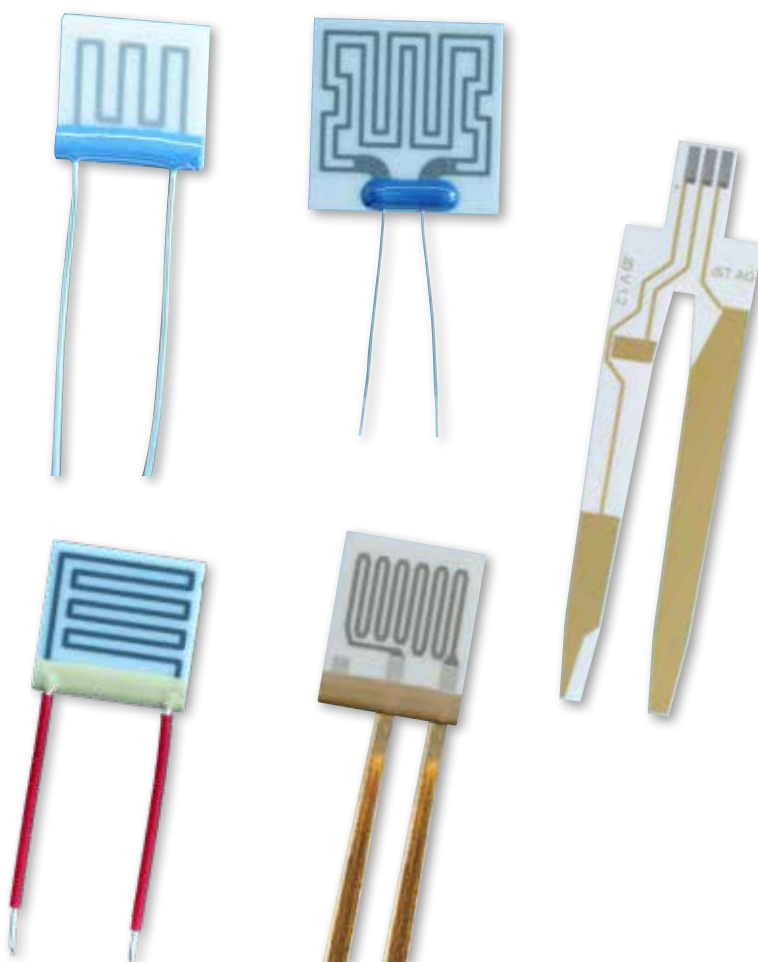
MICRO-HEATERS

Precise, reliable and cost-efficient.

Our micro-heaters are designed to fit your application's needs. Heating of small spaces is not only needed in car cigarette-lighters, but across a wide range of industries—from automotive to laser manufacturing, humidification units, life-science, 3D printing, medical devices and other instances where targeted heating of tiny spaces is required.

Up to 1000° C Up to 30 W/cm² in air Heat-up rates up to 100K/s (higher rates available upon request)

- Different substrates available such as Alumina, Zirconia, Sapphire
- Various connections such as welding, soldering or bonding available
- Simulation of heat-up rates, power consumption and thermal de-coupling
- Optimized heater design tailor-made to customer's requirements
- Broad resistance range
- Pt and Ag based heater materials



AVAILABLE IN ANY SIZE AND SHAPE UP TO 4"



Innovative Sensor Technology IST AG

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www.ist-ag.com | MADE IN SWITZERLAND

PROVIDING SWISS TECHNOLOGY WORLDWIDE

At IST we offer a fast design-in-process and ideal sensor operation conditions for the development of your application. The choice of materials, technologies, size, form and capabilities of our sensors is extremely vast. Our experts help you find the right ingredients to build the ideal sensor to suit your application.



Custom designs for all your applications. Speed up your product design phase by ordering application-specific sensor components pre-assembled for easy system integration. Our IST experts will help you find the right sensor solution to fit your requirements.



**TELL US WHAT
YOU'RE LOOKING
FOR AND WE'LL
CUSTOMIZE
IT TO YOUR
APPLICATION**



Design



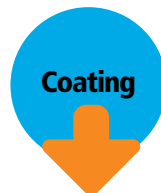
Concept
Material choice
Technology choice
Design of layout



Substrate



Alumina • Zirconia • Sapphire • Steel
Copper • Polyimide • Aluminum nitride
Silicon wafer • Glass



Coating



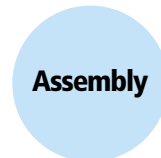
Metal thick film (Pt, Ag, Au & alloys)
Dielectric thick film (glass or organic polymers)
Metal thin film (Pt, Rh, Ti, Ni, Cr, Ag, Au, Al, W, Mo & alloys)
Dielectric thin film (SiO₂, Si₃N₄, Ta₂O₅, polyimide)



Patterning



Photolithography
Laser trimming
Dry and wet etching



Assembly



Dicing • Bonding • Glass coating • Soldering
Electric final testing • Optical final testing
Packaging • Additional assembly

The perfect fit for any application

Micro-heaters are used in devices requiring a small but accurate heat source with precise temperature control, such as optical interactive assistance systems. Micro-heaters offer a precision heat source for gas and humidity sensors, biopsy or tissue samples for medical analysis and malignant tumor treatment. Each micro-heater is individually customized and designed to fit your application's requirements.

