euromat
INDUSTRIAL SURFACE SOLUTIONS

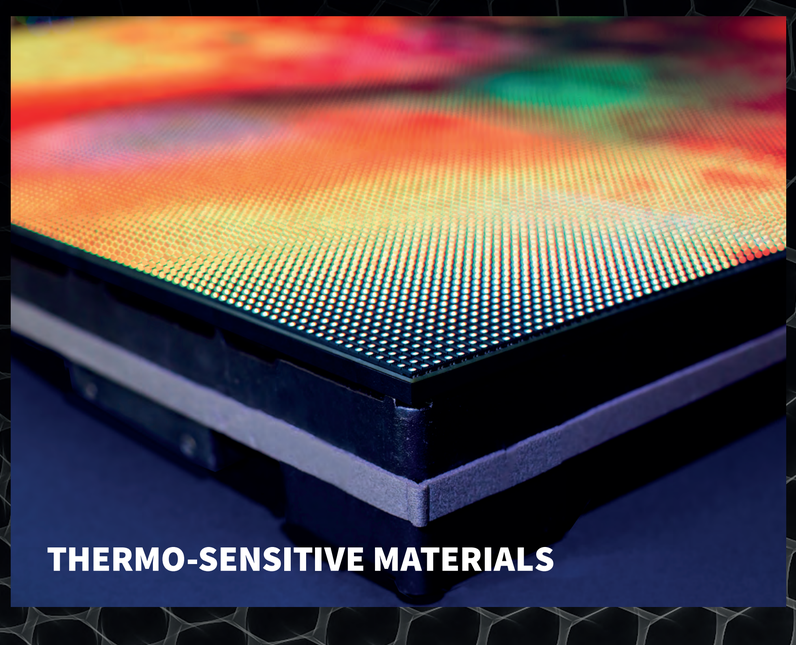
INNOVATIVE MATERIALS COMBINATIONS FOR HIGH-END COMPONENTS

STRESS-FREE SOLDERING + METALLIZATION

- Metals + Light Metals
- Ceramics + Glasses

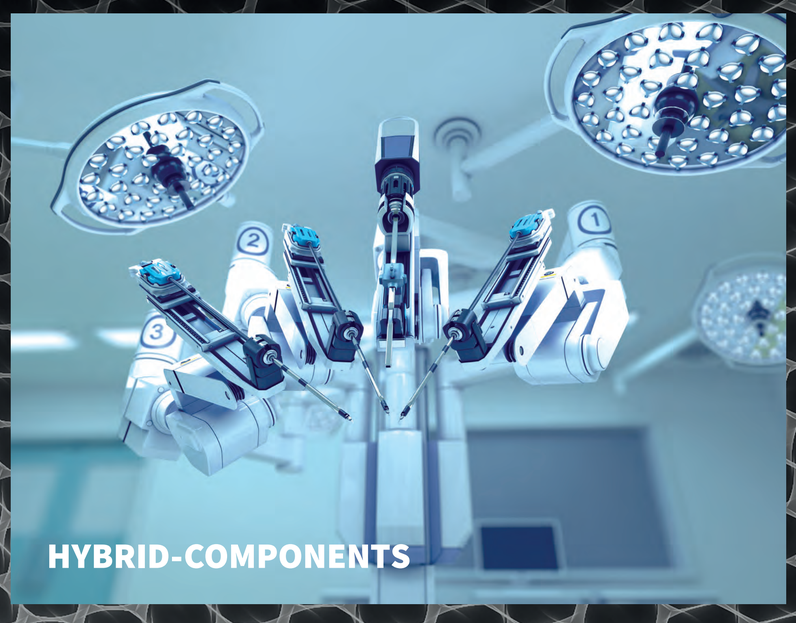
FUNCTIONAL COATINGS MADE BY BRAZING

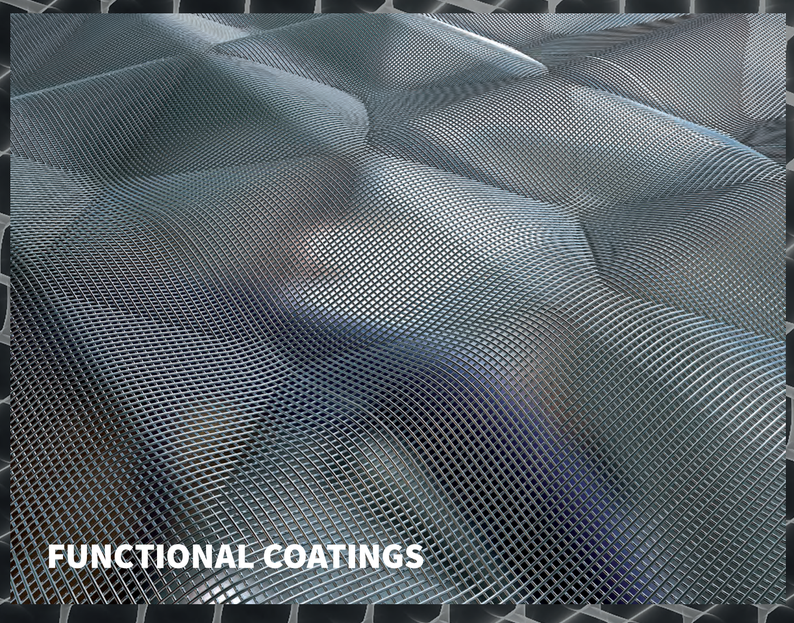
- Metals
- Ceramics + Hard Metals


THERMO-SENSITIVE MATERIALS


HEATING-COOLING SYSTEMS


OPTICAL COMPONENT & SENSORIC ELEMENTS


HYBRID-COMPONENTS


FUNCTIONAL COATINGS

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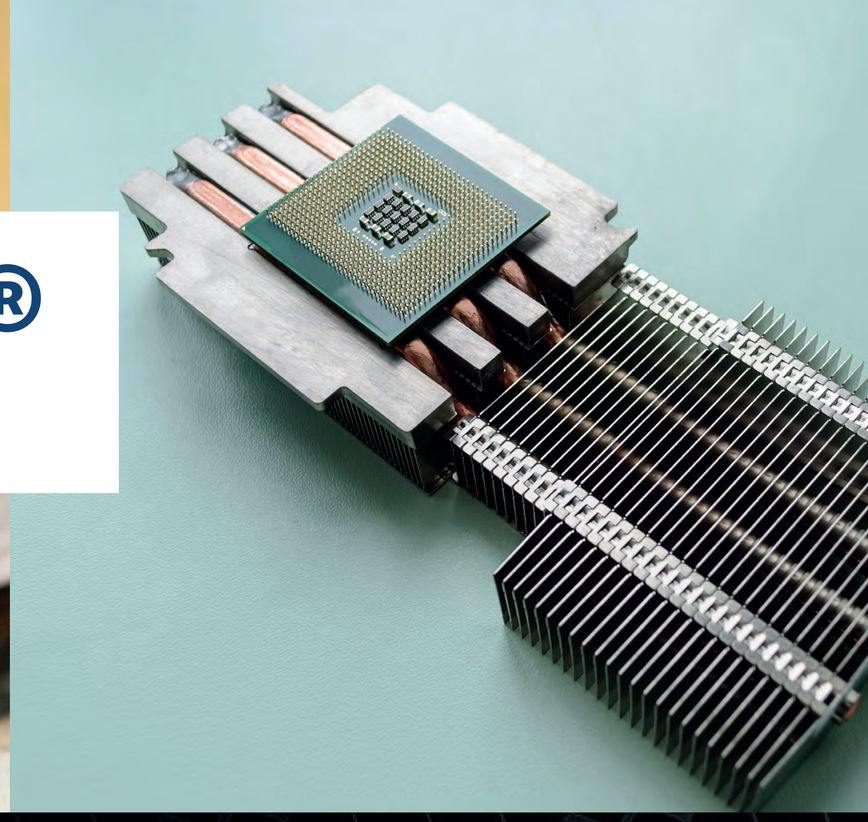

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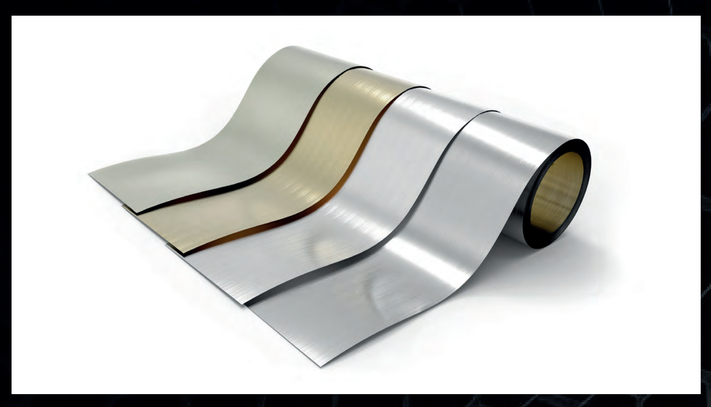
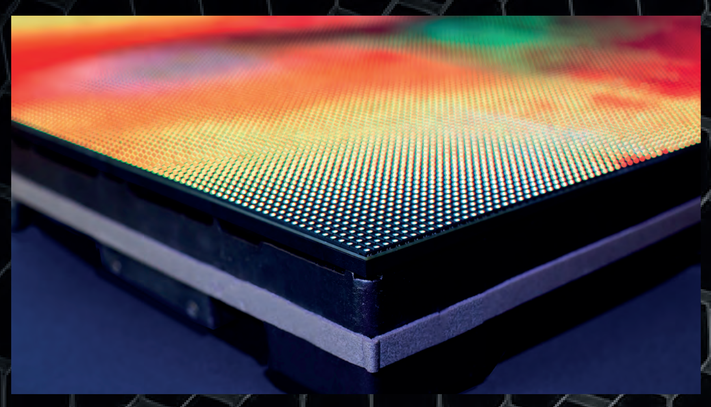
ULTRASONIC-SOLDERING TECHNOLOGY

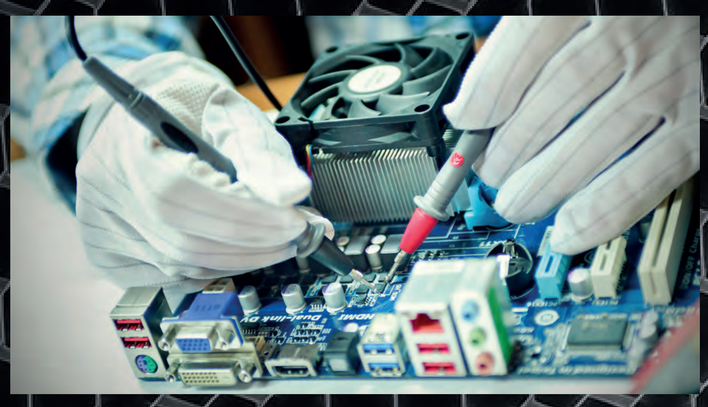
Joining and metallizing of metals, lightmetals, glasses and ceramics for thermal management applications in automotive, electronics and life science.

KEY ASPECTS FOR TECHNOLOGY DEVELOPMENT

- Leadfree and fluxless soldering-technology regarding RoHS- und WEEE-Rules
- Environment-friendly atmospheric soldering without flux and heavy metals
- Metallization and soldering of metals, light metals, ceramics, glasses, composites (Si-SiC, Al-SiC, Al-Al2O3)
- Soldering temperatures ranging between 150 °C up to 480 °C
- Set up of complete line including materials, processes and equipments







ULTRASONIC-SOLDERING MATERIALS

ULTRASONIC-SOLDERING PROCESS

ULTRASONIC-SOLDERING EQUIPMENTS

DESCRIPTION OF THE ULTRASONIC-SOLDERING PROCESS

- Hermetic seal and suitable for cryogenic temperatures and vaccum applications
- High thermal resistance with good electrical and thermal conductivity properties
- Exellent behaviour under stress of thermal mismatch
- High shear strenght of soldered joints made by metallurgical bondings
- Fluxfree soldering process means no corrosion of soldered joints
- Economic solution for metallizing of materials which are difficult to wet
- Manifold solder materials are available for different applications and requirements
- Patented unleaded solder materials available regarding RoHS-Rules
- Ultrasonic soldering machines and processes can be adapted to individual applications
- Process runs automated or manually

APPLICATIONS OF THE ULTRASONIC-SOLDERING PROCESS

- Surface metallization for contact soldering or casting
- Elektronic-transformers-contacts
- Optical glasses, glass fibres
- Thermo-management, cooling plates, heaters, light weight structures
- Vacuum components, thin film subtrates, targets, sensors, magnets, sintering metals
- Semiconductors, superconductors, solar cells
- Maintenance and new part production

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