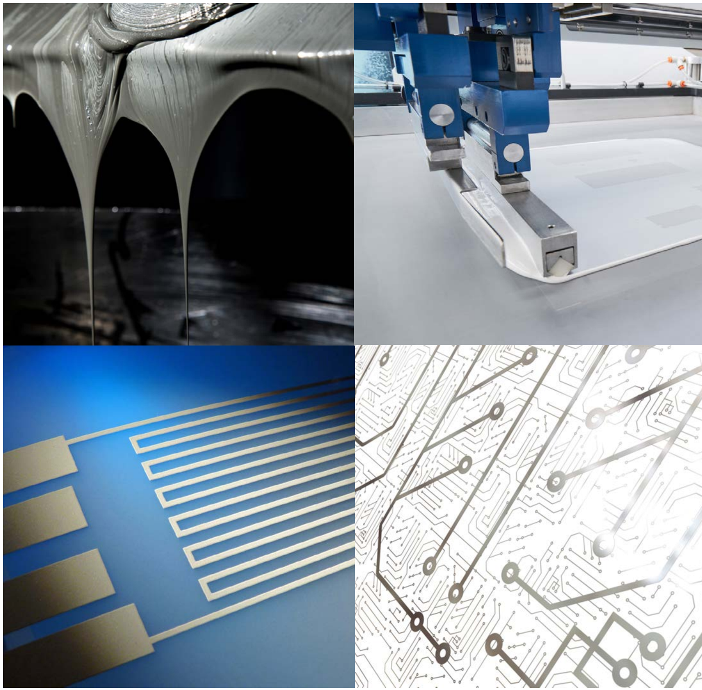
Fact Sheet

MICROMAX™

Design Options Abound with Micromax™ Advanced Packaging Solutions



Micromax™ microcircuit and component materials provide designers advanced packaging solutions. Our integrated suite of printable inks enable sophisticated treatment of today's most challenging advanced packaging challenges.

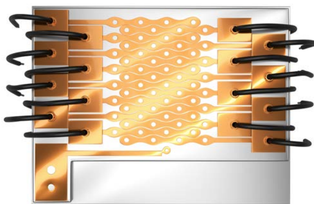
Micromax™ thick film conductive, resistive, and dielectric inks for advanced packaging drive device functionality in applications ranging from cell phones to satellites to self-driving vehicles. Plus, they help achieve high device density, greater speed, and increasing power levels.

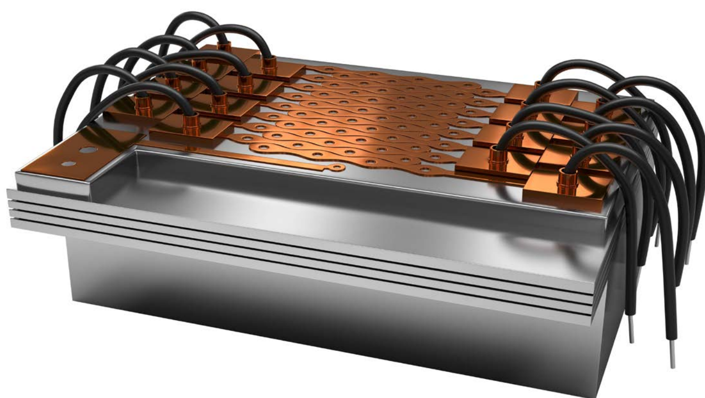
Micromax™ Advanced Packaging Inks in Action

Take a look at the Vertical Cavity Surface Emitting Laser (VCSEL) below to see how our suite of materials enables:

- higher power density
- higher device reliability
- reduced cost of manufacturing

VCSEL Array Top View





Bare Die Soldered to Metallization

VCSEL Cross Section Illustration

Die Attach (Ag ink or Au/Sn)

- Micromax™ Offer: DA510
- Current Ag ink 5 µm

Encapsulation Layer

- Micromax™ Offer: ALN44, KA 702
- Current resist 5 µm after cure
- High durability

Die Pad: Conductive Ink (Cu)

- Developing thicker Cu Paste targeting 30-40 µm cured
- Micromax™ Offer: 7732—40 µm thickness possible (A1203), and LF911 high viscosity version (A1203)

Thermal Via

- Micromax™ Offer: REACH Compliant
- THR35 (Au), THR61 (Ag/Pd), 7988R (Ag/Pd)

Advantages of Micromax™ Advanced Packaging Solutions

Thermal Management

- Tunable CTE with high adhesion to a variety of substrates including AlN
- Single pass film cured thickness of 30 to 50 μm
- High thermal and electrical conductivity
- Solderable and plateable print surfaces
- Mechanical compatibility with tungsten vias

Die Encapsulant

- Superior environmental resistance
- Excellent thermal and mechanical stress tolerance
- Single pass thickness of 5 μm provides full performance

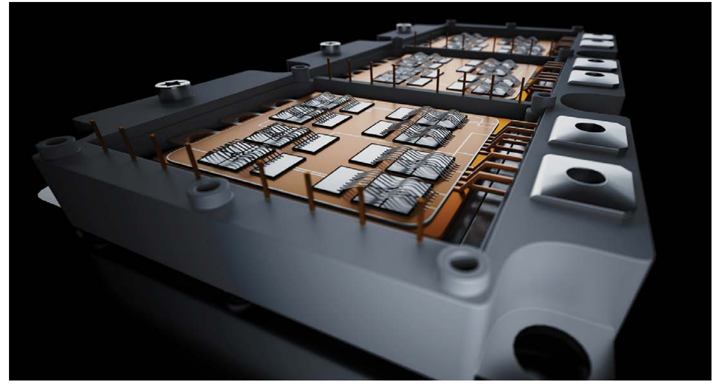
Die Attach

- Low pressure sintering silver pastes
- High thermal and electrical conductivity
- High productivity thru fast takt
- Broad manufacturing process compatibility

Thermal Via

- Excellent performance in high aspect ratio application

All Micromax™ advanced packaging solutions are REACH compliant.



View of Die Attach Application

For more information about Micromax™ materials, contact your Micromax™ representative.

Micromax™ is a leading brand of printable, stretchable, and moldable functional thick film inks, pastes and ceramic tapes. Micromax™ brand products are utilized for circuitry, interconnection and packaging of electronic devices in automotive, passive components, telecom, consumer electronics, healthcare and military applications featuring properties such as enhanced circuit density, improved thermal management, higher reliability and other critical functionality. Micromax™ represents over 60 years of experience in the development, manufacture and sale of specialized electronic materials, and offers leading global customer support and product quality and consistency.

https://www.mobility-materials.com/brands/micromax.html

MICROMAX™

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