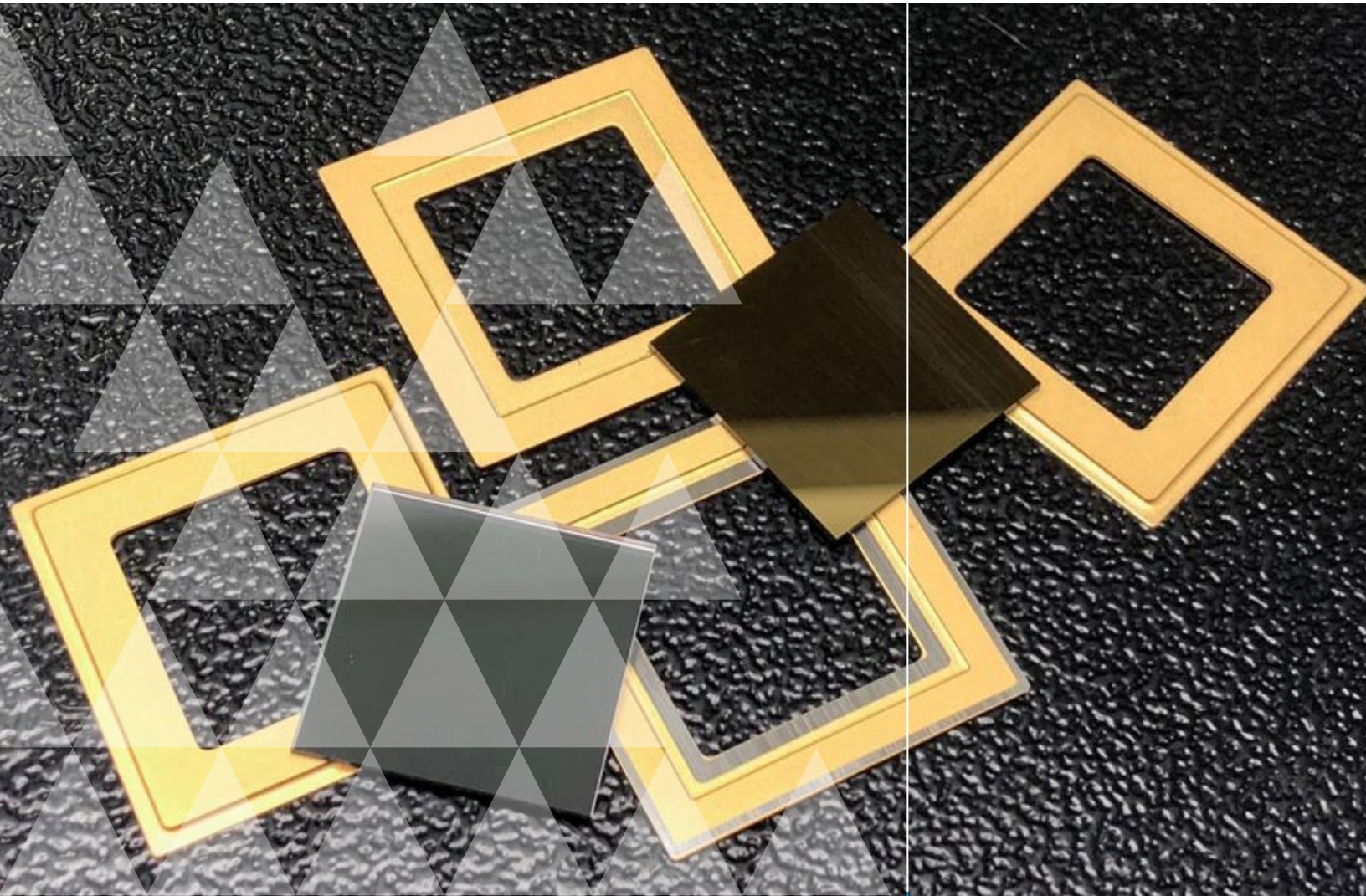




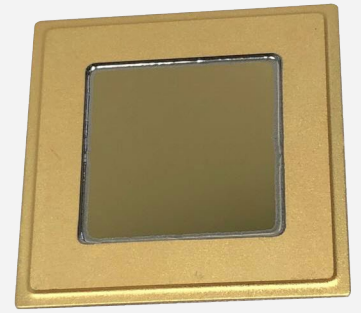
MATERION



ADVANCED MATERIALS

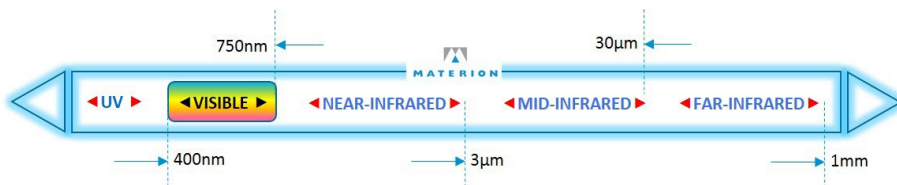
Visi-Lid™
Optical Window
Attached Etch Lid

Visi-Lid™ Optical Window Attached Etch Lid



The Challenge

There is a growing demand for windows that can be hermetically sealed. Technologies such as MEMS, LIDAR, CCD chips, photodiodes, laser diodes and others employ hermetic packages that must transmit electromagnetic radiation. The ideal optical cover lid would provide a complete hermetic packaging solution that addresses the wavelengths below. Commonly, the window must include anti-reflective (AR) coatings that operate on either a single or a range of wavelengths. The combination of window material, surface finish, and AR coating provides the desired transmittance of the window.



The Solution

Materion has developed a hermetic optical cover lid assembly that addresses the light-sensitive requirements for electronic devices. Visi-Lid™ is a complete solution for mixing and matching various optical windows onto a wide range of housing. It offers an AR coated window soldered onto an etched Kovar frame for seam seal attachment to the package. Advantages include:

- Variety of window substrates such as glass, sapphire, germanium, silicon and other compatible windows customized for visible, infrared or ultra violet light operating applications
- Precise Visi-Lid housing with attached selectively metallized, AR-coated window that is leakproof for high performance hermetic sealing
- Assemblies that hermetically house optical windows onto Kovar etch frames that can be sealed by soldering or welding
- Stand alone, unframed windows with selective metallization, with the solder frame tack welded onto the metallized window
- Anti-reflective coatings designed for specific transmission requirements
- Variety of solder preforms that can be tack-welded to the Kovar frame of the Visi-Lid, thus simplifying assembly onto your microelectronic housing

BENEFITS

Materion is an industry-leader in durable solutions for hermetic cover lids and microelectronic packaging. Our unique Visi-Lid™ cover can be used for a wide range of industry applications.

- Our integral window represents a leading-edge solution for your packaging/sealing challenges
- In-house custom-design and manufacturing capabilities
- Extensive knowledge of solder sealing systems and assembly
- Engineering support from initial design through final assembly

Window Materials

- Glass
- Germanium
- Silicon
- Sapphire

ANTI-REFLECTIVE COATINGS

- AR coatings for your spectrum

SELECT SOLDERS

Materion is an industry leader in developing and manufacturing solder alloys for optoelectronic applications.

Typical materials include:

- 80Au 20Sn (liquidus: 280°C, solidus: 260°C)
- 86Pb 8Bi 4Sn 1Ag 1In (liquidus: 286°C, solidus: 268°C)
- 95.5Sn 3.8Ag .7 Cu (liquidus: 217°C, solidus: 217°C)
- 90Sn 10Au (liquidus: 217°C, solidus: 217°C)



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MATERION ADVANCED MATERIALS is an industry leader in providing durable and best-cost solutions for ceramic packages and hermetic cover/lids for the wireless infrastructure market. We offer a comprehensive portfolio of packaging materials and can customize package materials to satisfy your unique needs. Our high-reliability packaging also supports most configurations, applications and volume requirements. Because of our industry expertise, extensive global manufacturing capabilities and R&D proficiency, we are able to meet customers' packaging requirements today and partner with them to meet future challenges.