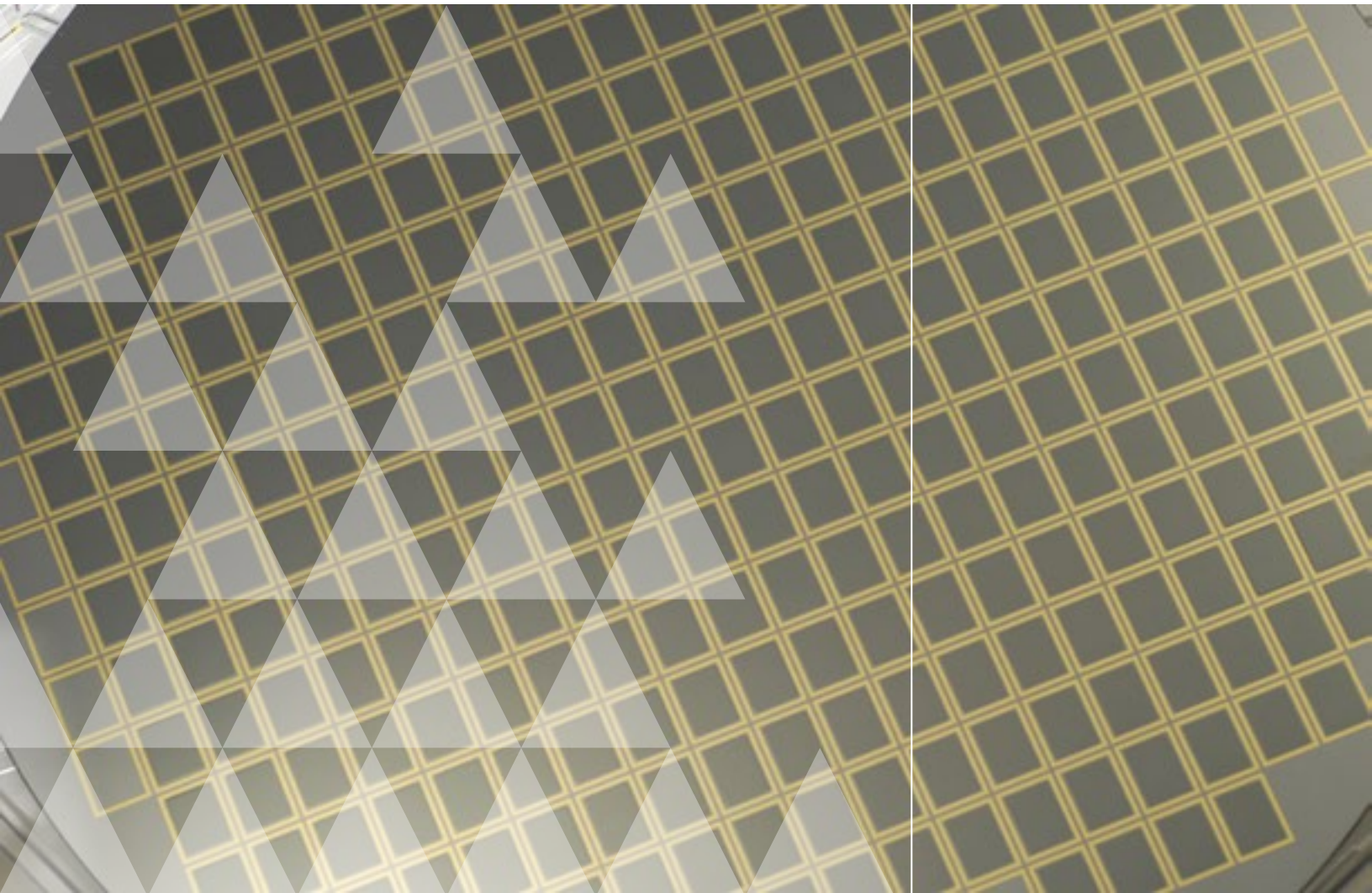




MATERION



PRECISION OPTICS

NanoGetters[®]
Technology

NanoGetters®

The Challenge

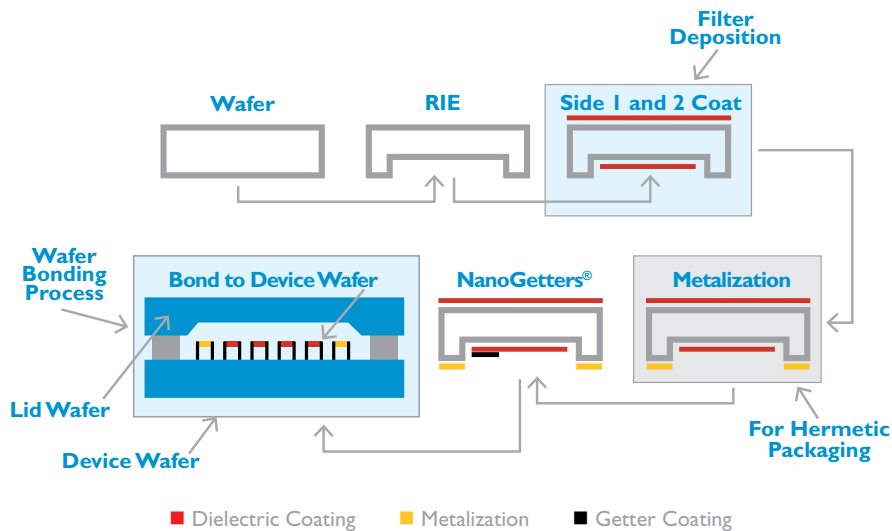
When using some of the traditional non-evaporative getter technologies for the production of MEMS devices, there may be a problem regarding the generation of particles in the package. These particles are undesirable and could shift in the package over time. This could potentially cause major issues including electrical shorts and changes in resonant frequency.

The Solution

Materion's NanoGetters® technology offers a superior alternative for vacuum packaging reliability. It uses proprietary materials and processes to eliminate the problem of stray gases trapped within device packaging. Since it is thin film-based, it is also particle-free. Some of the benefits include:

- Exhibits superior cleanliness
- High yield
- Wafer-level, high vacuum (<1mTorr) encapsulation
- Can be deposited on variety of substrates
- Longer-term vacuum stability
- Resists oxidation at room temperature

Turnkey Solution for WLP Lid Wafers



INTEGRATED APPROACH FOR WAFER LEVEL PACKAGING

In addition to the technical advantages of NanoGetters® Technology, Materion offers a one-stop solution to the manufacturing of cap wafers for the wafer level packaging (WLP) of optical sensing devices. We can now provide optical coatings, solderable metallization and getter technology all under one roof – turnkey services unavailable elsewhere in the marketplace. Customers' advantages include:

- Efficiencies from working with a single source provider
- Cost effective
- Simplified supply chain
- Reduced lead times
- Technical staff support for design assistance

BENEFITS

- Consistency in processes and product quality
- Compatibility with all MEMS technologies: polysilicon surface, bulk, silicon-on glass & LIGA micromachining
- Established technology leader for innovative thin film solutions
- ISO 9001:2008, ITAR compliant, AS9102 qualified

APPLICATIONS

- Optical devices
- IR sensors
- RF-MEMS
- Chemical sensors
- Microfluidic devices
- Accelerometers, gyroscopes
- Pressure & flow sensors
- Density meters
- Resonators
- Vacuum displays



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MATERION PRECISION OPTICS is a leading manufacturer and supplier of optical filters and custom coating services. We use innovative technologies to produce a broad array of products including complex optical filters, filter arrays, lens coatings, gesture recognition filters & sensors, flexible thin film assemblies and project display components. We offer solutions for diverse markets including defense, commercial, space, life sciences, medical, astronomy and thermal imaging.