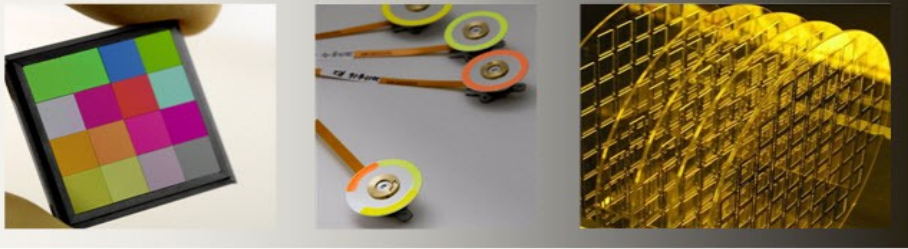




Optical Innovation News

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The Evolution of Coating Processes

Today's coating processes provide the capability to produce anti-reflective (AR) coatings, bandpass filters, separation filters, high laser damage threshold coatings, mirror coatings, etc. with high precision and high yields. The production environment is based on batch-coating processes and component sizes that range from mm to meter. Generally, one function such as limited wavelength coverage is provided by the standard coating process.

The desire to incorporate optical coatings at the wafer-level stage was inspired by semiconductor manufacturing practices, and has led to an evolution in specialty optics requirements. Development of processes that would enable complex multi-layer coatings to be incorporated into wafer manufacture called for new thinking. It allowed for the reduction of deposition temperatures and incorporation of photolithographic steps to define smaller coated areas.

Working at the wafer level can mean significant cost reduction as many devices can be handled at once. A single wafer can incorporate as many as 10s to 1000s of devices. Adding complex precision optical filters directly to the detector eliminates handling, weight, thickness and part count, but is not without peril. [Read More...](#)

Multispectral Filters Improve Camera Imaging

Product differentiation is key, especially in markets where a number of products that exhibit similar performance characteristics are available from a large number of vendors. This is especially true in today's industrial camera market where only a handful of vendors manufacture CCD and CMOS imagers, making it difficult for camera vendors to differentiate their products based on sensor performance alone. While most of the imagers today use the Bayer mosaic to allow color images to be captured, some sensor and camera manufacturers now offer custom filters that can be added to sensors and cameras to target specific application areas. [Read More....](#)



Close Encounter with Pluto...with a little help from Materion

After 9 1/2 years hurtling three billion miles through the solar system, NASA's New Horizons spacecraft passed within 7,800 miles of Pluto in July providing scientists back on earth with arresting new images. High-performance materials from Materion Precision Optics were on board for much more than the ride. Traveling at more than 31,000 miles per hour, the probe crossed the face of Pluto in just three minutes, allowing for our closest look ever at this mysterious dwarf planet. The spacecraft, about the size of a grand piano and swathed in gold-colored foil, spent almost two-thirds of its time in hibernation to keep its systems operational. [Read More...](#)

Optical Coatings on ASIC Wafers

The use of CMOS image sensing technology has grown considerably over the last several years. According to a market report by Yole Development, the CMOS image sensing market will reach \$10.4B by 2016 with > 4.1B sensors being manufactured. Much of the volume growth can be attributed to its use in mobile and tablet applications. Beyond mobile, the versatility and functionality of CMOS technology is finding its way into many other applications that will continue to drive growth. [Read More...](#)

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Face to Face

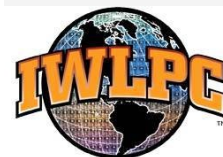
Meet David Harrison, Business Development Manager Image & Sensing. Dave's focus is on connecting Materion technology and capabilities to new customers in the CMOS image sensor community and within the space-based remote sensing and observation communities.



In October, Dave will be celebrating his silver anniversary with the company and had this to say: "I truly enjoy coming to work every day. The mix of cutting edge technology, great people and interesting products keeps a creative guy such as myself fully engaged. Whether working on optics for a space satellite, a camera headed to Mars or the latest mobile platform, the work is incredibly rewarding." While officially located at the Westford, MA facility, Dave travels extensively and conducts business development across the globe in the US, Europe and Asia. He reports to Michael Zasowski, Sr. [Read more about Dave ...](#)

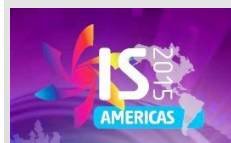
Events - Join us!

International Wafer Level Packaging Conference



October 13-14  
San Jose, California  
Booth #46

Image Sensors America



November 17-19  
Berkeley, California  
Display #3

