

Rapid R&D Prototyping with ProIR™ Filters

As the Infrared sensing market continues to expand into numerous applications, there is an industry demand for superior quality optical filters that will yield optimal performance. To support these evolving uses, that include consumer electronics and smart home applications, Materion Precision Optics is introducing a new line of ProIR™ filters. The filters will be offered in a broad range of wave lengths to meet individual customer needs. Because ProIR™ filters are available “off-the-shelf,” they allow for rapid prototyping and cost-effective experimentation

Customers will now have the option to select from in-stock ProIR™ filters in wavelengths from the mid-wave through long-wave IR (see table below). These filters deliver superior coating durability and spectral performance when coupled to a detector. As another available option, if the customer has specific requirements that cannot be met using stock materials, Materion can also provide customized design solutions.

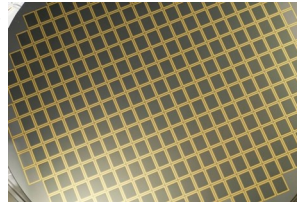
Materion Precision Optics has over 40 years of experience in manufacturing complex optical filters from the UV to far IR. Here are just some of the benefits ProIR™ filters provide: Exceptional durability per MIL standards, State-of-the-art spectral performance, Quick turnaround, Highest transmission available, Better signal-to-noise ratio, Lot-to-lot repeatability and Volume production of MWIR/LWIR NB coatings [Read More...](#)

Materion Nanogetters® Technology

When using traditional non-evaporative getter technologies for the production of MEMS devices, there can be a problem with particles being generated in the package. These particles are undesirable and can shift in the package over time causing major issues such as electrical shorts and changes in resonant frequency. There is also a potential problem with stray gases trapped within device packaging and impacting performance.

To counter such problems, Materion offers NanoGettersR Technology. This provides a superior alternative for vacuum packaging reliability. It uses proprietary materials and processes to eliminate the issue of stray gases within the packaging and since it is thin film-based, it is also particle free.

In addition to the technical advantages of NanoGettersR Technology, Materion can now provide optical coatings, solderable metallization and getter technology all under one roof. This turnkey solution for the manufacture of cap wafers for wafer level packaging (WLP) of optical sensing devices is unavailable elsewhere in the market place. [Read More...](#)



Materion's Role in Optical Filters for NASA

Since the original launch of Hubble Space Telescope in 1990, NASA engineers knew there would be a need for upgrades over time to extend its life. With camera and detector technologies improving at a rapid pace, many of the optical components would need to be replaced in order to fulfill the mission of obtaining high-quality images of stars, galaxies and other celestial bodies.

These optics upgrades would pose challenges to the company producing them. They would have to deal with requirements for very, very narrow-band filters as well as IR imaging filters that could function at low temperatures. The filters would also need to be applied all the way to the outer edges of the optic – something that had not been attempted before – to let in virtually every photon at the wavelengths they weren't designed to block out. [Read More...](#)

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Optical Innovation News

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2017 SPIE George W. Goddard Award

George Allen and Tom Mooney of Materion Precision Optics, Westford, MA are members of the New Horizons Instrument Team which has been awarded the SPIE George W. Goddard Award for 2017. The Materion employees provided critical high performance optics and coatings for “Ralph” to Ball Aerospace, the instrument designer and integrator. New Horizons is an interplanetary space probe on a NASA mission to examine Pluto and the Kuiper Belt at the edge of our solar system. [Read More...](#)

Cassini Spacecraft - Still Taking Pictures!

After almost 20 years in orbit, NASA's Cassini spacecraft is still sending back spectacular images taken through Materion filters. Launched in October 1997, Cassini entered orbit around Saturn in July 2004 after a voyage that included flybys of Earth, Venus and Jupiter. The recent 2017 images of Saturn's moon Daphnis were shot with a Narrow Angle Camera (NAC) with Materion filters. [Read More...](#)

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