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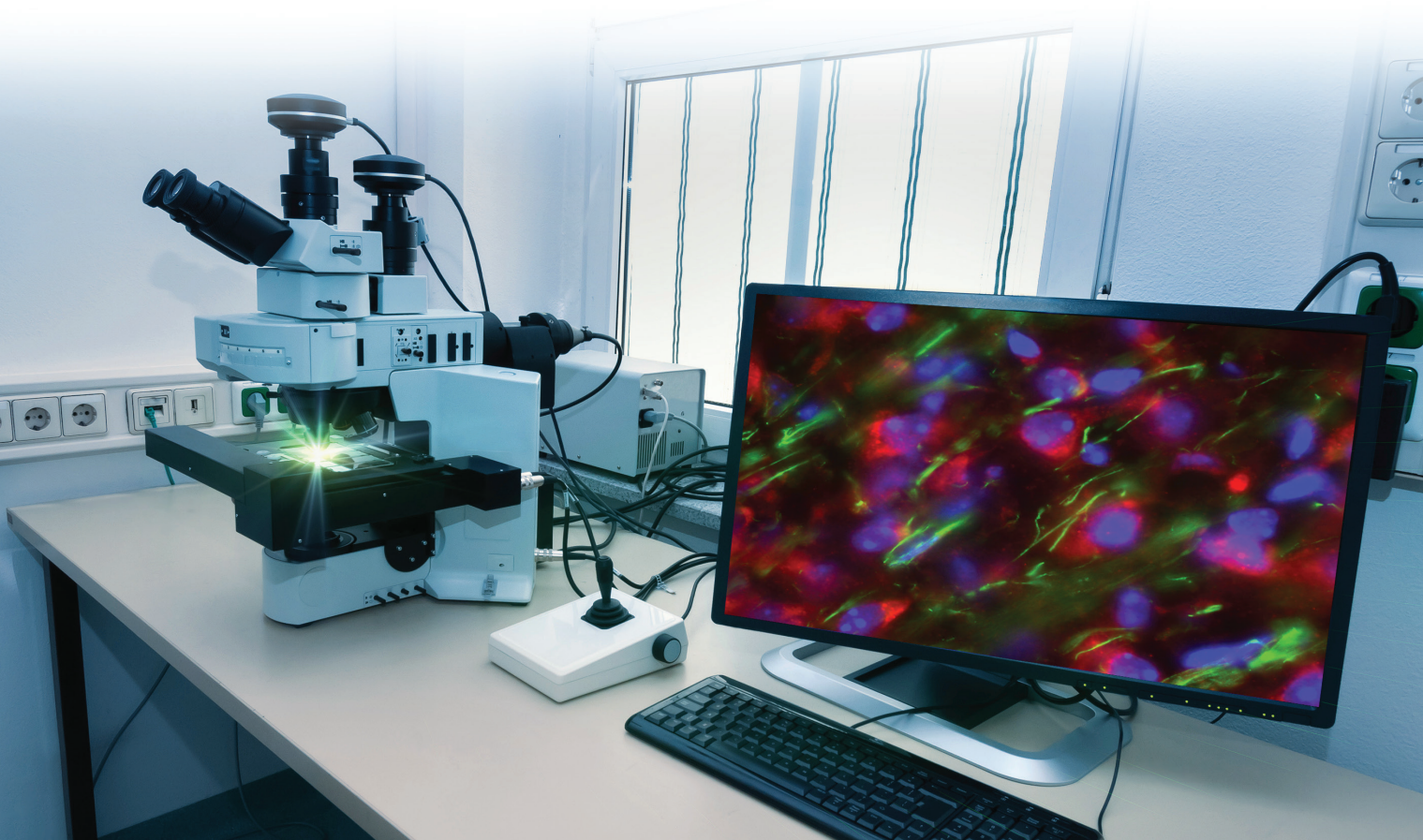
# **VIAVI**

## **Optical Solutions for Fluorescence Imaging**

VIAVI technologies are ideal for demanding applications that require high contrast performance, wavelength agility, and 24/7 reliability. Our patented low angle shift (LAS) bandpass filters enable instrument miniaturization and improve signal collection. VIAVI Engineered Diffusers<sup>®</sup> generate best in class uniform illumination beams with efficient light management. Our durable wafer level patterned coatings are enabling novel biosensors and continuous healthcare monitoring devices.

VIAVI products are relied upon in a wide variety of medical diagnostic, life science instrumentation, and health care applications.

We uniquely combine quality, performance and low-cost solutions in our offerings, while de-risking supply chain with our facilities and teams based in US and Asia.



# Thin Film Optical Coatings

VIAVI hard-coated thin film optical filters provide precise spectral edge placement, improving accuracy of quantitative imaging applications such as Polymerase Chain Reaction (PCR), DNA sequencing and spatial biology. Steep spectral edges combined with high transmission and high blocking improves fluorescence signal collection and enables high-multiplexing assays.

In the pathway of the illumination beams, VIAVI filters provide >90% transmission from UV to NIR and help maintain wavefront quality of the incident beam to ensure focused illumination spots. Within the emission beam's trajectory, tight wavefront control facilitates diffraction-limited imaging performance in fluorescence imaging. When positioned within the emission light pathway, VIAVI Notch Filter enhances the signal-to-noise ratio (SNR) by effectively blocking excitation or stray light.

To enable miniaturized instruments with high sensitivity, VIAVI provides several enabling technologies. This includes low angle shift (LAS) filters in instruments that require narrower bandpass filters than traditional thin film coatings when imaging a wide field of view, absorbing coatings that provide effective suppression of stray light even with >90° angle of incidence, and 0.2 mm thin glass substrates, or wafer level coatings leading to reduced form factor.

## Light Shaping Optics

VIAVI Engineered Diffusers<sup>®</sup> help generate uniform illumination beams with minimal transmission loss, enhancing throughput in fluorescence imaging and enabling reduced cost DNA sequencing and spatial biology instruments. Customized beam shaping and wavelength agnostic performance of our products, sends light where its needed, matching illumination field of view with the imaging sensor, reducing photobleaching, improving signal-to-noise ratio and throughput, while minimizing system complexity and reducing cost.

Our Polymer-on-glass based Microlens Arrays are at the heart of low-cost confocal instruments, and Vortex Phase Plates provide precision wavefront control and are a key enabler for the super-resolution imaging microscopes. For fluorescence instruments utilizing high power lasers, our Reactive Ion Etched (RIE) products provide high laser damage threshold performance with peace of mind.

## Applications

- Polymerase Chain Reaction (PCR)
- DNA Sequencing
- Flow Cytometry
- Microscopy
- High-content Screening
- In-Vivo Imaging

## VIAVI Product Offerings

- Thin Film Optical Coating
  - Bandpass/edge Filters
  - Dichroic Beamsplitters
  - Notch Filters
  - UV to Mid-infrared Coatings
  - Low Angle Shift (LAS) Filters
  - Mirrors
- Light Shaping Optics
  - Engineered Diffusers
  - Microlens Arrays
  - Vortex Phase Plates
  - Diffractive Optical Elements

