Viavi Solutions manufactures a wide range of optical assemblies, including:

- Prism assemblies
- Color wheels
- Fixed and linear variable filter assemblies

For applications that require multiple wavelength discrimination coupled with small detectors, edge-bonded assemblies are often the most cost-effective solution.

Edge-bonded assemblies typically have three to five separate filter elements cemented edge-to-edge to form a single substrate. With suitable mounting hardware, the edge-bonded assembly is typically mounted in close proximity to the detector. This eliminates the need for large filter elements near the entrance to the optics system.

Each filter element of the assembly is cut from an oversize, coated module, which results in a wide range of possible sizes and materials for the final assembly.

Edge-bonded assemblies are ideal for many applications where space, weight and survivability are the most important considerations.

We offer other products for spectroscopic applications. Our complete production facilities can support your optical filter requirements from prototypes through OEM volumes. We provide worldwide customer service and technical support.

**Key Features**

- Multiple spectral bands in a common assembly
- Individual filter elements selected for optimum performance
- Miniaturized for size-constrained applications
- Space-qualified materials designed to meet harsh environments
- Customized to fit detector size
- Opaque bonding materials prevent cross-channel interference
- Avoids low, cumulative yields typical of monolithic, multi-channel filters

**Applications**

- Multi-channel focal plane arrays
- Staring arrays
Environmental Specifications

Filter widths of 1-3 mm are typical.

Blocker Coatings
Incoming Signal

Detector side of assembly held flat. Tilt between filters ≤ 30°.

Bandpass coatings facing detector

Substrate. Often different thicknesses and materials to control focus shift.

Bond Gap: 0.15 mm with opaque epoxy to reduce crosstalk (~ 0.01 % T @ 80K)

Aperture mask for crosstalk reduction (painted or coated with dark mirror).

Ordering Information

For more information on this or other products and their availability, please contact your local Viavi account manager or Viavi directly via the contact information listed below.