

## Custom Filters from Prototype to Production

## Overview

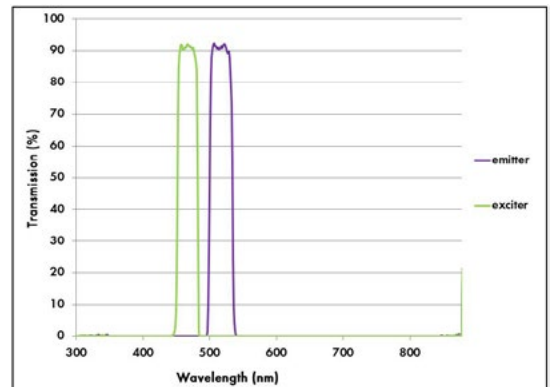
Omega has been a leader in the life science and biomedical filter arena since the 1970s when it introduced its first fluorescence filters. Working closely with cutting-edge researchers, Omega was the first to standardize fluorescence sets, introduce multiband filters for simultaneous visualization of multiple fluorophores and the first to develop an online spectral viewing tool. Omega exhibits continued excellence in this area, designing a record-breaking wide-band dielectric mirror with reflectivity above 99.5% over a 1400 nm range.

## Why choose an Omega Filter?

- Use Omega to design and manufacture **custom filters** that will differentiate your product
- 50 years of engineering services to optimize your filter needs
- 40 years in Fluorescence
- Extensive inventory for rapid prototyping and development
- High-volume production
- In house optic shop for custom sizes, shapes and substrates

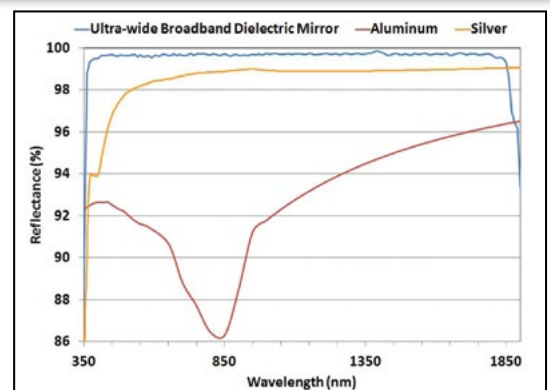
## Bandpass Filters for Microplate Readers, Clinical Chemistry, and Point-of-Care Diagnostics

- Transmission > 85% between 400 and 1200 nm
- Spectral width (FWHM) starting at 10 nm
- OD >4 blocking of unwanted signals from 400-1200 nm
- Batch process yields up to 400 one inch parts per run for high-volume orders
- Throughput of up to 10,000 parts per week
- Custom sizing available from 2 – 90 mm



## Dielectric Mirrors for Instrument Designers and Benchtop Use

- Dielectric mirrors have superior durability to metal mirrors
  - Ideal for humid environments (i.e. incubators) and temperature cycling
  - Performance will not degrade over time
  - Oxide coatings are non-reactive
- Customers must specify angle-of-incidence and wavelength range for reflectance
- Custom sizing available 1-90 mm

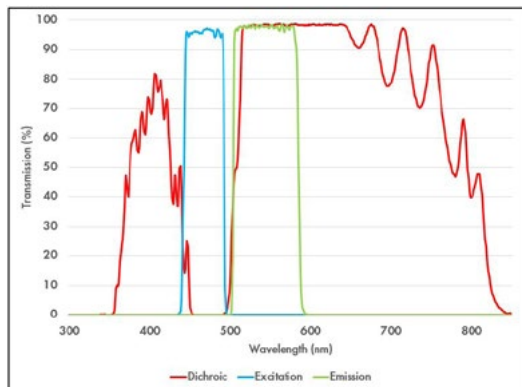
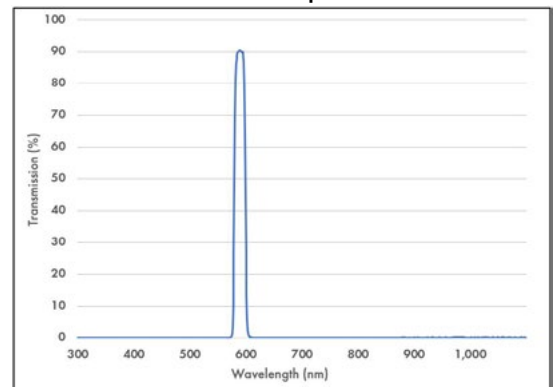
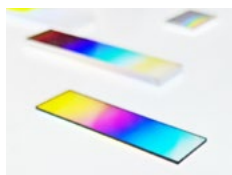


**Fluorescence Filter Sets for Microscopy, PCR, Flow Cytometry, and Benchtop Work**

- Standard microscopy sets available with fast turnaround
- View dye and filter curves with curvomatic
- 25 mm excitation and emission filters [designed to fit most microscope filter cubes]
- 25.7 x 36 mm dichroics [designed to fit most microscope filter cubes]
- 2-day turnaround typical
- Plate stock of common filters available for custom sizing

**Custom Filters for Researchers**

- RapidBands provide custom solutions with quick turnaround
- 25 mm ring-mount suitable for use in most microscopes
- 3-day turnaround typical
- Access Omega's extensive inventory for economical custom requests
- Call, email or fill out a Build-a-filter request form
- 10-day turnaround

**Fluorescence Filter set XF411**

**590BP20 RapidBand**

**Development Projects at Omega Optical**
**Linear Variable Filters for low-cost spectroscopy**


- Can be used for lightweight spectroscopy
- Can also be used for order-sorting
- Applications-
  - Drone-based crop monitoring
  - Flow-cytometry

**Coated fiber tips for unique system designs**


- Nearly any coating prepared on flat glass can be applied to the tip of an optical fiber
- Applications-
  - single-point fluorescence or Raman measurement
  - time-indexed spectral multiplexing

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