

## TECHSPEC® 409nm, 12.5 x 17.6mm High Performance Fluorescence Dichroic Filter



Stock #34-724 **15 In Stock**

⊖ 1 ⊕ €309.<sup>00</sup>

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Volume Pricing	
Qty 1-5	€309,00 each
Qty 6-25	€247,20 each
Qty 26-49	€227,63 each
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

### SPECIFICATIONS

#### General

Dichroic Filter **Type:**

## Physical & Mechanical Properties

12.5 x 17.6 **Dimensions (mm):**

17.60 **Length (mm):**

1.05 ± 0.1 **Thickness (mm):**

12.50 **Width (mm):**

+0.0/-0.2 **Dimensional Tolerance (mm):**

**Physical Durability:**  
Adhesion per ML-PRF-13830B, Section C.4.5.12  
Moderate abrasion per ML-PRF-13830B, Section C.4.5.11  
Cleaning per ML-C-48497A Section 4.5.4.2

## Optical Properties

45 **Angle of Incidence (°):**

409.00 **Cut-On Wavelength (nm):**

**Substrate:**   
**Fused Silica** (Corning 7980)

Hard Coated **Coating:**

$R_{avg} > 98\%$  **Reflection (%):**

325 - 404 **Reflection Wavelength (nm):**

40-20 **Surface Quality:**

$T_{avg} > 90\%$  **Transmission (%):**

415 - 850 **Transmission Wavelength (nm):**

$\lambda/10$  **Transmitted Wavefront, RMS:**

325 - 850 **Wavelength Range (nm):**

$\lambda/2$  **Surface Flatness (P-V):**

## Environmental & Durability Factors

**Environmental Durability:**  
Humidity per ML-STD-810H, Section 507.6  
Temperature per ML-STD-810H, Section 501.7 and 502.7

## Regulatory Compliance

**RoHS 2015:**  
**Compliant**

**Certificate of Conformance:**  
**View**

**Reach 247:**  
**Compliant**

## PRODUCT DETAILS

- Improved Flatness, Transmitted Wavefront, and Surface Quality
- Ideal for Fluorescence Microscopy or High Magnification Imaging Applications
- Most Popular Cut-On Wavelengths of Fluorescence and Longpass Dichroic Filters
- Standard **Fluorescence Dichroic Filters** are also available

Our TECHSPEC® High Performance Fluorescence Dichroic Filters feature the same broad, flat transmission and reflection ranges as our popular TECHSPEC® Fluorescence Dichroic Filters, but have improved physical parameters. Special attention to surface flatness, transmitted wavefront, and surface quality have resulted in our highest level of precision yet on a filter. These rectangular filters fit into most common Nikon, Zeiss, and Olympus fluorescence microscopes. High Performance Fluorescence Dichroic Filters are a perfect complement to our TECHSPEC® Fluorescence Bandpass Filters. For specific wavelength or size requirements, numerous custom options are available.

The TECHSPEC® Dichroic Filters (sometimes referred to as dichroic plate beamsplitters or dichroic mirrors) feature broad, flat transmission and reflection ranges with an ultra-steep slope between them. These attributes make them ideal for fluorescence imaging or spectral sorting applications, including DNA sequencing and polymerase chain reaction (PCR) diagnostic instruments.

**Note:** The filter should be oriented in such a way that the incoming light is incident on the surface that the chevron on the edge of the filter points towards (the dielectrically coated surface).

## TECHNICAL INFORMATION

Filter Type	Transmitted Wavefront (RMS)	Surface Quality	Surface Flatness (P-V)	R(avg)	T(avg)
HP Dichroic	$\lambda/10$	40-20	$\lambda/2$	>98%	>90%
Fluorescence Dichroics	$1\lambda$	60-40	-	>98%	>90%
Dichroic Longpass	$\lambda/4$	40-20	-	>97%	>85%

## CUSTOM

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

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