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TECHSPEC® 648nm CWL, 12.5mm Dia, 14nm Bandwidth, OD 6 Fluorescence Filter

Stock **#33-335** **1 In Stock**

- 1 + **€284**.00

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Volume Pricing	
Qty 1-5	**€284,00** each
Qty 6-25	**€227,00** each
Qty 26-49	**€213,00** each
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Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:
Bandpass Filter

Compatible Fluorophore:
FITC Emission

Physical & Mechanical Properties

Diameter (mm):
12.50 +0.00/-0.10

Clear Aperture CA (mm):
8.69

Construction:
Mounted in Black Anodized Ring

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

Substrate Thickness (mm):
2.00 ±0.25

Optical Properties

Angle of Incidence (°):
0 ±5

Bandwidth (nm):
14.00

OD 6 Blocking Wavelength Range (nm):
300 - 621 & 677 - 925

Optical Density OD (Average):
≥6.0

Average Transmission (%):
>93 over Bandwidth

Center Wavelength CWL (nm):
648.00

Full Width-Half Max FWHM (nm):
20.00

Substrate:
BOROFLOAT®

Coating:
Hard Coated

Surface Quality:
60-40

Transmission (%):
93.00

Blocking Wavelength Range (nm):
250 - 1100

Transmitted Wavefront, RMS:
λ/4 (prior to coating)

Threading & Mounting

Mount Thickness (mm):
3.5 ±0.1

Environmental & Durability Factors

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

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
View

Reach 247:
Compliant

Need different specs or modifications?

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.

Product Details

- Common Wavelengths for Popular Fluorophores
- Excitation Filters and Emission Filters Available
- >93% Transmission
- >OD 6 Blocking, <3% from Edge of Bandwidth

- **Fluorescence Filter Sets** and **Pre-Mounted Fluorescence Filter Cube Sets** Also Available

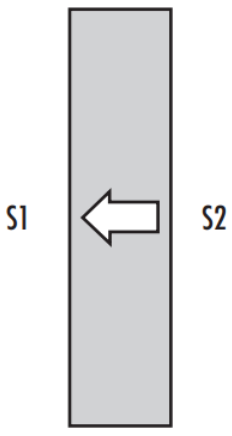
Our TECHSPEC® Fluorescence Bandpass Filters perfectly match common fluorophores' absorption and emission characteristics in fluorescence imaging applications. Excitation and emission filters are available, featuring high transmissions in the passband (≥ 93% for VIS designs) and >OD 6 blocking outside of the passband. These filters are also ideal components in applications using spectroscopic fluorescence detection, including analytical chemistry and biomedical instruments such as DNA sequencers and polymerase chain reaction (qPCR) devices. Each filter features state-of-the-art hard-sputtered coatings and is mounted in a black anodized ring for easy system integration.

Fluorescence microscopy and spectroscopy applications typically use a combination of three filters for each color channel (detection of individual fluorophores), an excitation and an emission bandpass filter, as well as a dichroic filter (also dichroic beamsplitters, such as our **Fluorescence Dichroic Filters** and **High-Performance Fluorescence Dichroic Filters**). More information on fluorescence microscopy and an example beam path can be found in the AppNote **Fluorophores and Optical Filters for Fluorescence Microscopy**. In short, excitation filters “clean up” the excitation light used to excite the fluorophores in the sample. On the other hand, emission filters allow only the emitted fluorescence to pass through to the detector while effectively blocking the excitation light and different wavelengths, producing high-contrast images and superior image clarity.

Our fluorescence bandpass filters are engineered with cutting-edge technology and are designed to enhance signal-to-noise ratios, improve contrast, and deliver excellent performance in optical imaging applications. These filters are designed to be widely compatible with microscopes from Nikon, Olympus, and Zeiss, making them suitable for various imaging applications, including widefield, confocal, multiphoton, and other fluorescence microscopy modalities. Whether you are imaging fixed cells, live cells, or tissues, our filters are engineered to deliver consistent and reliable image quality. Additionally, these filters can be used for fluorescence detection in qPCR, flow cytometry, or multi-well plate readers in applications such as immunofluorescence or high-throughput screening in which fluorescent molecules or dyes detect specific molecular structures or DNA sequences.

TECHSPEC® Fluorescence Bandpass Filters are optimized for maximum transmission within a specific wavelength range. They effectively isolate fluorescence signals from background noise, enhancing sensitivity and enabling more accurate detection of fluorophores. Explore our range of filters today and unleash the full potential of your fluorescence microscopy setup.

Technical Information



All mounted TECHSPEC® Optical Filters have an arrow on the side of the mount that points to the filter-coated surface for quick reference. Filter oriented such that arrow points to filter coated surface S1. Anti-reflective (AR) coating is applied to S2.

Compatible Mounts

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