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Fluorescence Imaging Filters and Sets (Page 1 of 2)

Features

- Ø25.0 mm Excitation and Emission Filters
- 25.2 mm x 35.6 mm Dichroic Filters
- Manufactured Using Hard-Coating Ion Beam Sputtering Technology
- Filter Sets Include Excitation, Emission, and Dichroic Filters
 - BFP
 - CFP
 - WGFP
 - GFP
 - FITC
 - YFP
 - TRITC
 - CY3.5
 - TXRED

Thorlabs' mounted Ø25.0 mm excitation and emission filters and unmounted 25.2 mm x 35.6 mm dichroic filters are designed specifically for use in fluorescence imaging applications. Nine types of filters are available to accommodate key wavelength ranges for many common fluorophores (or their alternatives): BFP, CFP, WGFP, GFP, FITC, YFP, TRITC, CY3.5, and TXRED.



Close Up of Engraving

SPECIFICATIONS	
Size	Ø25 mm x 5.0 mm (Excitation) Ø25 mm x 3.5 mm (Emission) 25.2 mm x 35.6 mm x 1.05 mm (Dichroic)
Clear Aperture	Ø21 mm (Excitation and Emission) 80% of Total Area (Dichroic)
Thickness Tolerance	±0.1 mm (Excitation/Emission) ±0.05 mm (Dichroic)
Dimensional Tolerance	±0.1 mm
Surface Quality	60-40 Scratch-Dig
Angle of Incidence	0° ± 5° (Excitation/Emission) 45° ± 1.5° (Dichroic)

Filter Design

These IBS filters are manufactured to high-performance optical specifications and designed for durability. They are produced with multiple dielectric layers deposited on a high-precision glass substrate. The substrate is ground and polished to ensure that the highest possible image quality is maintained. These hard-coated optics produce filter layers that are more dense than those obtained from electron beam deposition techniques. The dense filter layers reduce water absorption and greatly enhance durability, stability, and performance of the filter. Each filter layer is monitored during growth to ensure minimal deviation from design specification thickness, ensuring overall high-quality filter performance. All filters conform to MIL-STD-810F and MIL-C-48497A environmental standards.

Excitation/Emission Filters

These Ø25 mm excitation and emission filters feature dielectric layers that are deposited on fused silica substrates and mounted in 5 mm (excitation) or 3.5 mm (emission) thick black anodized housings. Each excitation (or emission) filter provides excellent transmission at the desired excitation (or emission) wavelength (>90%) with a sharp spectral cutoff and low transmission at other wavelengths (<0.001%).

Ø25.0 mm Excitation Filters

ITEM #	\$	£	€	RMB	FLUOROPHORE	CENTER WAVELENGTH	FWHM
MF390-18	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Blue Fluorescent Protein (BFP)	390 nm	18 nm
MF434-17	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Cyan Fluorescent Protein (CFP)	434 nm	17 nm
MF445-45	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Wild Type GFP (WGFP)	445 nm	45 nm
MF469-35	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Green Fluorescent Protein (GFP)	469 nm	35 nm
MF475-35	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Fluorescein Isothiocyanate (FITC)	475 nm	35 nm
MF497-16	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Yellow Fluorescent Protein (YFP)	497 nm	16 nm
MF542-20	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Tetramethylrhodamine Isothiocyanate (TRITC)	542 nm	20 nm
MF559-34	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Texas Red (TXRED)	559 nm	34 nm
MF565-24	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Cyanine (CY3.5)	565 nm	24 nm

Ø25.0 mm Emission Filters

ITEM #	\$	£	€	RMB	FLUOROPHORE	CENTER WAVELENGTH	FWHM
MF460-60	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Blue Fluorescent Protein (BFP)	460 nm	60 nm
MF479-40	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Cyan Fluorescent Protein (CFP)	479 nm	40 nm
MF510-42	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Wild Type GFP (WGFP)	510 nm	42 nm
MF525-39	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Green Fluorescent Protein (GFP)	525 nm	39 nm
MF530-43	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Fluorescein Isothiocyanate (FITC)	530 nm	43 nm
MF535-22	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Yellow Fluorescent Protein (YFP)	535 nm	22 nm
MF620-52	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Tetramethylrhodamine Isothiocyanate/ Cyanine (TRITC/CY3.5)	620 nm	52 nm
MF630-69	\$ 200.00	£ 144.00	€ 174.00	¥ 1,594.00	Texas Red (TXRED)	630 nm	69 nm

25.2 mm x 35.6 mm Dichroic Filters

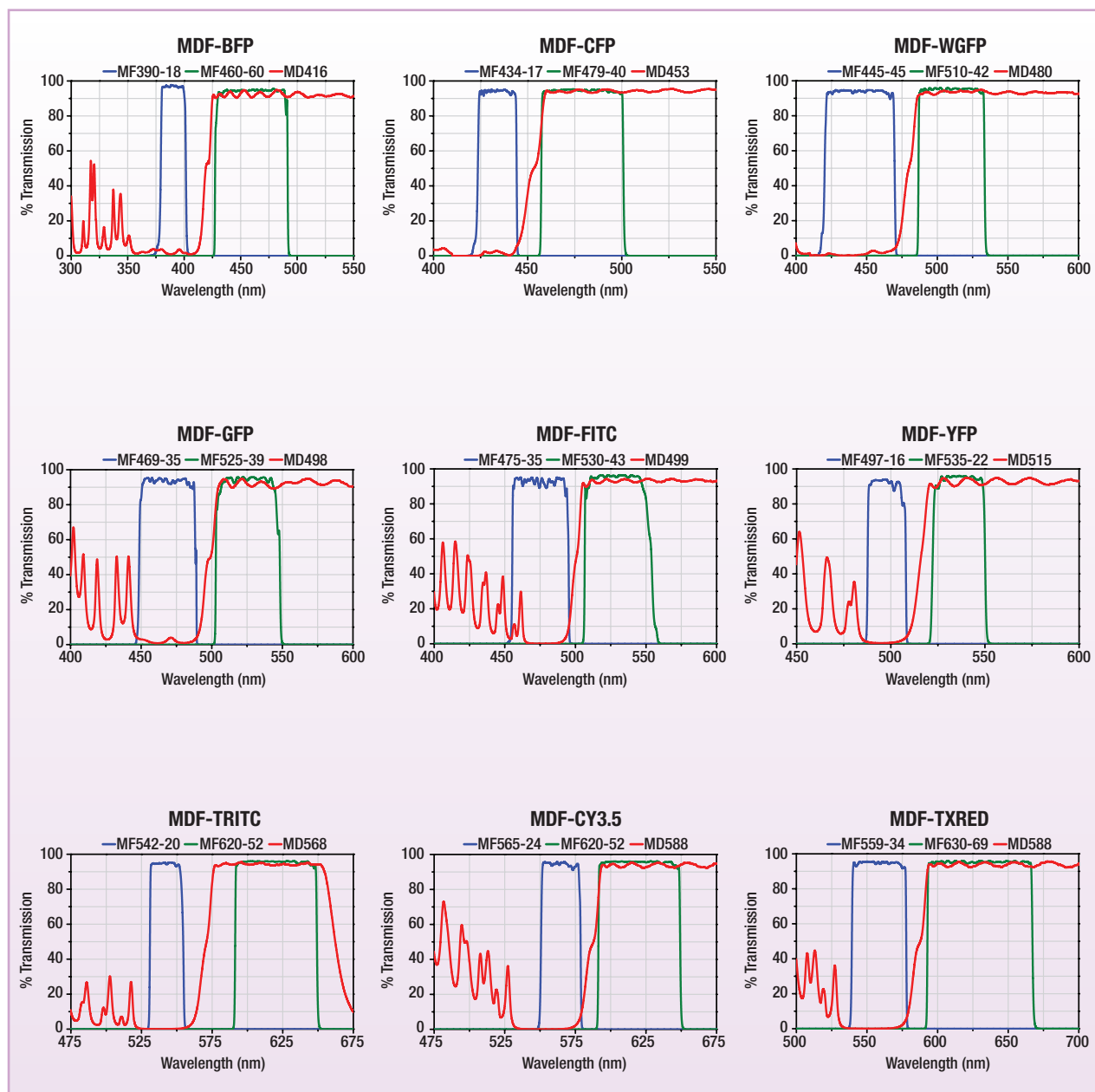
These dichroic filters are designed to separate light of different wavelengths. When light is incident on the filter at a 45° angle with respect to the normal, the excitation light and its associated back reflection are reflected while the longer wavelength fluorescence signal is transmitted. These filters are unmounted. If your application would benefit from a round, mounted dichroic filter with steeper cut-off, please visit our website.

ITEM #	\$	£	€	RMB	FLUOROPHORE	REFLECTION BAND	TRANSMISSION BAND
MD416	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Blue Fluorescent Protein (BFP)	360 – 407 nm	425 – 575 nm
MD453	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Cyan Fluorescent Protein (CFP)	423 – 445 nm	460 – 610 nm
MD480	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Wild Type GFP (WGFP)	415 – 470 nm	490 – 720 nm
MD498	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Green Fluorescent Protein (GFP)	452 – 490 nm	505 – 800 nm
MD499	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Fluorescein Isothiocyanate (FITC)	470 – 490 nm	508 – 675 nm
MD515	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Yellow Fluorescent Protein (YFP)	490 – 510 nm	520 – 700 nm
MD568	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Tetramethylrhodamine Isothiocyanate (TRITC)	525 – 556 nm	580 – 650 nm
MD588	\$ 195.00	£ 140.40	€ 169.65	¥ 1,554.15	Cyanine/Texas Red (CY3.5/TXRED)	533 – 580 nm	595 – 800 nm

Fluorescence Imaging Filters and Sets (Page 2 of 2)

Filter Sets

Since standard fluorescence imaging applications generally incorporate three different filters (i.e., one excitation, one emission, and one dichroic filter) to maximize the signal-to-noise ratio, Thorlabs offers these filters as a set at a savings over purchasing them separately.



Spectral Plots Available as Downloads (See www.thorlabs.com and Search on Part Number)

ITEM #	\$	£	€	RMB	DESCRIPTION
MDF-BFP	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	BFP Fluorescence Imaging Filter Set (3 Filters)
MDF-CFP	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	CFP Fluorescence Imaging Filter Set (3 Filters)
MDF-WGFP	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	WGFP Fluorescence Imaging Filter Set (3 Filters)
MDF-GFP	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	GFP Fluorescence Imaging Filter Set (3 Filters)
MDF-FITC	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	FITC Fluorescence Imaging Filter Set (3 Filters)
MDF-YFP	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	YFP Fluorescence Imaging Filter Set (3 Filters)
MDF-TRITC	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	TRITC Fluorescence Imaging Filter Set (3 Filters)
MDF-CY3.5	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	CY3.5 Fluorescence Imaging Filter Set (3 Filters)
MDF-TXRED	\$ 495.00	£ 356.40	€ 430.65	¥ 3,945.15	TXRED Fluorescence Imaging Filter Set (3 Filters)