



**Semrock, Inc**

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(within US and Canada)

**BrightLine® Pinkel filter set, optimized for DAPI, FITC, & Texas Red and other like fluorophores, illuminated with LED-based light engines**

Semrock's LED-based light engine filter sets are designed to use common excitation filters between single-band and corresponding multiband configurations to simplify interchangeability when installing the excitation filters into the light engine. This not only provides seamless transition between using single-band and multiband filter sets but also provides significant cost savings.

This 5-filter "Pinkel" triple-band set is designed for imaging of a sample that is simultaneously labeled with DAPI, FITC, and Texas Red, (or other key fluorophores – see complete list above). This set has been designed to deliver significant fluorescence signal improvements for LED-based light engines compared with traditional sets designed for standard broadband light sources such as mercury or xenon arc lamps. The complete set is comprised of a triple-band beamsplitter and a triple-band emitter (these can be offered assembled in a microscope cube), plus three "no burn-out" single-band exciters that are intended to be mounted in the LED-based light engines, or in an exciter filter wheel or slider.

Interested in learning how this filter set will perform with your light source? Try Semrock's [SearchLight](#) plotting & calculation tool.

**Individual filters and filter sets (no cube):**

These filters sets contain individual filters. For filter sets already mounted in a holder/cube, scroll down to see complete mounted sets with cubes.

Part Number	Price <sup>1</sup>	Stock Status	
LED-DA/FI/TX-3X-A-000 (Standard size set, fits most microscopes)	\$1,565	Contact Us	
<b>Filter Role</b>	<b>Filter Size</b>	<b>Part Number</b>	<b>Price<sup>1</sup></b>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
LED-DA/FI/TX-3X-A-000-ZERO (Standard size -ZERO pixel set)	\$1,664	In Stock	
<b>Filter Role</b>	<b>Filter Size</b>	<b>Part Number</b>	<b>Price<sup>1</sup></b>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
-ZERO set certification		<a href="#">-ZERO</a>	\$99
LED-DA/FI/TX-3X-A-L01 (Leica 'Large' set)	\$1,565	Contact Us	
<b>Filter Role</b>	<b>Filter Size</b>	<b>Part Number</b>	<b>Price<sup>1</sup></b>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	23.3 mm x 2.0 mm	<a href="#">FF01-432/523/702-23.3-D</a>	\$435
Triple Band Dichroic	22.0 mm x 29.0 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-22x29</a>	\$435



LED-DA/FI/TX-3X-A-L01-ZERO (Leica 'Large' -ZERO pixel set) \$1,664 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	23.3 mm x 2.0 mm	<a href="#">FF01-432/523/702-23 3-D</a>	\$435
Triple Band Dichroic	22.0 mm x 29.0 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-22x29</a>	\$435
-ZERO set certification		<a href="#">-ZERO</a>	\$99

LED-DA/FI/TX-3X-A-L02 (Leica 'Small' set) \$1,829 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305

\$1,625 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm threaded ring for Sutter Lambda filter wheel	<a href="#">FF01-392/23-25-STR</a>	\$375
Single Band Exciter	25 mm threaded ring for Sutter Lambda filter wheel	<a href="#">FF01-474/27-25-STR</a>	\$375
Single Band Exciter	25 mm threaded ring for Sutter Lambda filter wheel	<a href="#">FF03-575/25-25-STR</a>	\$325
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435

\$1,724 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm threaded ring for Sutter Lambda filter wheel	<a href="#">FF01-392/23-25-STR</a>	\$375
Single Band Exciter	25 mm threaded ring for Sutter Lambda filter wheel	<a href="#">FF01-474/27-25-STR</a>	\$375
Single Band Exciter	25 mm threaded ring for Sutter Lambda filter wheel	<a href="#">FF03-575/25-25-STR</a>	\$325
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
-ZERO set certification		<a href="#">-ZERO</a>	\$99

1) US domestic pricing only. If you are ordering from outside the US, please contact your nearest [regional distributor](#) for the correct list price.

### Complete filter sets mounted in microscope holders/cubes:

These sets are delivered already mounted in microscope filter holders, often called 'cubes', ready to be dropped into your microscope.

**Nikon Quadfluor** for microscopes: E200, E400, E600, E800, E1000, TS100, TS100F, TE200, TE300, ME600L, L150A, and some Labophot, Optiphot, and Diaphot series

LED-DA/FI/TX-3X-A-NQF (set mounted in cube) \$1,960 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
Quadfluor cube		<a href="#">NQF</a>	\$395

LED-DA/FI/TX-3X-A-NQF-ZERO (-ZERO pixel set mounted in cube) \$2,059 In Stock

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
Quadfluor cube		<a href="#">NQF</a>	\$395
-ZERO set certification		<a href="#">-ZERO</a>	\$99

**Nikon TE 2000** for microscopes: TE 2000, 50i, 55i, 80i, 90i, Eclipse Ti, Ni, and Ci series, and any using the Epi-fluor Illuminator

LED-DA/FI/TX-3X-A-NTE (set mounted in cube) \$1,960 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
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Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
TE 2000 cube		<a href="#">NTE</a>	\$395

☑ LED-DA/FI/TX-3X-A-NTE-ZERO (-ZERO pixel set mounted in cube) \$2,059 In Stock

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
TE 2000 cube		<a href="#">NTE</a>	\$395
-ZERO set certification		<a href="#">-ZERO</a>	\$99

**Olympus U-MF2 for microscopes: AX70, BX, BX41, BX50, BX51, BX60, BX61, BX50/51WI, BX60/61WI, IX50, IX51, IX70, IX71, IX81**

☑ LED-DA/FI/TX-3X-A-OMF (set mounted in cube) \$2,000 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
U-MF2 cube		<a href="#">OMF</a>	\$435

☑ LED-DA/FI/TX-3X-A-OMF-ZERO (-ZERO pixel set mounted in cube) \$2,099 In Stock

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
U-MF2 cube		<a href="#">OMF</a>	\$435
-ZERO set certification		<a href="#">-ZERO</a>	\$99

**Olympus U-FF for microscopes: BX53, BX63**

☑ LED-DA/FI/TX-3X-A-OFF (set mounted in cube) \$2,000 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
U-FF cube		<a href="#">OFF</a>	\$435

☑ LED-DA/FI/TX-3X-A-OFF-ZERO (-ZERO pixel set mounted in cube) \$2,099 In Stock

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
U-FF cube		<a href="#">OFF</a>	\$435
-ZERO set certification		<a href="#">-ZERO</a>	\$99

**Zeiss FL Cube EC P+C for microscopes: Axio Imager, AxioStar Plus, Axioskop 40, Axioskop 2 (post-2001), Axioplan 2i, Axioplan 2ie, Axiovert 200, Axiovert 40, Axio Observer, Axio Examiner and Axio Scope A1**

☑ LED-DA/FI/TX-3X-A-ZHE (set mounted in cube) \$1,840 Contact Us

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355



Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
FL Cube EC P+C cube		<a href="#">ZHE</a>	\$275

☑ LED-DA/FI/TX-3X-A-ZHE-ZERO (-ZERO pixel set mounted in cube) \$1,939 [In Stock](#)

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
FL Cube EC P+C cube		<a href="#">ZHE</a>	\$275
-ZERO set certification		<a href="#">-ZERO</a>	\$99

#### Leica DM-K for microscopes: DM-2000, DM-2500, DM-3000, DMI3000 B, DM-4000, DMI4000 B, DM-5000, DM-5500, and DM-6000, DMI6000 B

☑ LED-DA/FI/TX-3X-A-LDMK (set mounted in cube) \$1,915 [Contact Us](#)

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	23.3 mm x 2.0 mm	<a href="#">FF01-432/523/702-23 3-D</a>	\$435
Triple Band Dichroic	22.0 mm x 29.0 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-22x29</a>	\$435
DM-K cube		<a href="#">LDMK</a>	\$350

☑ LED-DA/FI/TX-3X-A-LDMK-ZERO (-ZERO pixel set mounted in cube) \$2,014 [Contact Us](#)

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	23.3 mm x 2.0 mm	<a href="#">FF01-432/523/702-23 3-D</a>	\$435
Triple Band Dichroic	22.0 mm x 29.0 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-22x29</a>	\$435
DM-K cube		<a href="#">LDMK</a>	\$350
-ZERO set certification		<a href="#">-ZERO</a>	\$99

#### Leica DMI8 (P-Cube) for microscopes: DMI8

☑ LED-DA/FI/TX-3X-A-LDMP-ZERO (-ZERO pixel set mounted in cube) \$2,099 [In Stock](#)

Filter Role	Filter Size	Part Number	Price <sup>1</sup>
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-392/23-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF01-474/27-25</a>	\$355
Single Band Exciter	25 mm x 5.0 mm	<a href="#">FF03-575/25-25</a>	\$305
Triple Band Emitter	25 mm x 3.5 mm	<a href="#">FF01-432/523/702-25</a>	\$435
Triple Band Dichroic	25.2 mm x 35.6 mm x 1.1 mm	<a href="#">FF409/493/596-Di01-25x36</a>	\$435
DMI8 (P-Cube) cube		<a href="#">LDMP</a>	\$435
-ZERO set certification		<a href="#">-ZERO</a>	\$99

1) US domestic pricing only. If you are ordering from outside the US, please contact your nearest [regional distributor](#) for the correct list price.

### Optical Specifications

Specification	Value
Blocking	BrightLine filters have blocking far exceeding OD 6 as needed to ensure a black background, even when using modern low-noise CCD cameras. The blocking is optimized for microscopy applications using our exclusive SpecMaker™ fluorescence filter design.

### General Filter Specifications

Specification	Value
Microscope Compatibility	BrightLine filters are available to fit Leica, Nikon, Olympus, Zeiss, and Apero microscopes.
Optical Damage Rating	Testing has proven to show no signs of degradation when exposed to at least 6.0 W of power from an unfiltered xenon arc lamp over a 25 mm diameter (corresponding to 1.2 W/cm <sup>2</sup> ) for over 500 hours.

### Physical Filter Specifications

Specification	Value
Scratch-Dig	60-40
Exciter/Emitter Orientation	Arrow on ring indicates preferred direction of propagation of light.
Dichroic Orientation	"Reflective coating side" should face toward light source and sample.

### Fluorophore Compatibility

★★★★ indicates this filter set was specifically optimized for this fluorophore.

★★★ indicates an excellent spectral match between fluorophore and filter set that should result in nearly ideal performance in most situations.

★★ indicates a good match between fluorophore and filter set, with actual performance dependent on other experimental conditions.

#### Blue

Fluorophore	Compatibility
Alexa Fluor® 405	★★★★
BD Horizon V450	★★★
BFP (EBFP)	★★★
Cascade Blue™	★★★★
CellTrace calcein violet	★★★
DAPI	★★★★
DyLight 405	★★★★
HiLyte Fluor™ 405	★★★★
LIVE-DEAD Fixable Violet Dead Cell Stain	★★
LysoSensor Blue	★★★
Marina Blue	★★
Pacific Blue™	★★
sgBFP™	★★★
SpectrumBlue	★★★
TagBFP	★★
Vybrant DyeCycle Violet	★★

★★★★ indicates this filter set was specifically optimized for this fluorophore.

★★★ indicates an excellent spectral match between fluorophore and filter set that should result in nearly ideal performance in most situations.

★★ indicates a good match between fluorophore and filter set, with actual performance dependent on other experimental conditions.

#### Green

Fluorophore	Compatibility
5-FAM (5-carboxyfluorescein)	★★★
Acridine Orange (+DNA)	★★
Acridine Yellow	★★
Alexa Fluor® 430	★★
Alexa Fluor® 488	★★
Alexa Fluor® 500	★★
AmCyan1	★★★★
ATTO 465	★★
ATTO 488	★★
ATTO 495	★★★
BOBO™-1	★★
BODIPY FL	★★
BODIPY FL-MeOH	★★
Calcein	★★★
CFP2	★★★★
Cy2™	★★★★
CyQUANT GR-DNA	★★
DAF-FM-NO	★★★
Dendra2 (Green)	★★★★
DiO	★★★★
Dronpa	★★
DY-505-Phalloidin	★★
ecliptic pHLuorin pH5.5	★★★★
Emerald	★★★★



evoglow-Bs1	☆☆
<b>FITC (Fluorescein)</b>	☆☆☆☆
<b>Fluo-4</b>	☆☆☆☆
Fluorescein dextran	☆☆
Fluorescein-pH 8.0	☆☆
Fluoro-Emerald	☆☆☆
FluoSpheres Yellow-Green fluorescent microspheres	☆☆
<b>GFP (EGFP)</b>	☆☆☆☆
Green 496	☆☆☆
Green 500	☆☆
HCS LipidTOX Green phospholipidosis	☆☆
HiLyte Fluor™ 488	☆☆☆
LIVE-DEAD Fixable Green Dead Cell Stain	☆☆☆
LysoSensor Green	☆☆☆
LysoTracker Green	☆☆☆
LysoTracker Yellow HCK-123	☆☆
mHoneyDew	☆☆☆
<b>MitoTracker™ Green</b>	☆☆☆☆
mTFP1	☆☆
mWasabi	☆☆☆
<b>NBD-X (MeOH)</b>	☆☆☆☆
NeuroTrace 500/525 Green Fluorescent Nissl Stain	☆☆☆
Oregon Green™ 488	☆☆☆
PicoGreen	☆☆
<b>PKH67</b>	☆☆☆☆
Qdot® 525 Nanocrystals	☆☆
Qdot® 545 Nanocrystals	☆☆
Rhodamine 110	☆☆☆
Rhodamine Green	☆☆☆
Rhodol Green	☆☆☆
<b>sgGFP™ (super glow GFP)</b>	☆☆☆☆
Sodium Green	☆☆
SpectrumGreen	☆☆☆
SYBR Gold nucleic acid gel stain-DNA	☆☆☆
SYBR Green I nucleic acid gel stain-DNA	☆☆☆
SYBR Safe DNA gel stain-DNA	☆☆
SYTO 11	☆☆
SYTO 13	☆☆☆
<b>SYTO 16</b>	☆☆☆☆
<b>SYTO 9</b>	☆☆☆☆
SYTO RNASelect geen fluorescent cell stain	☆☆
SYTOX Green-DNA	☆☆
TagCFP	☆☆
TOTO-1	☆☆
<b>TurboGFP</b>	☆☆☆☆
Vybrant DyeCycle Green	☆☆
<b>wtGFP (wild type GFP, non-UV excitation)</b>	☆☆☆☆
<b>YO-PRO-1</b>	☆☆☆☆
<b>YOYO-1</b>	☆☆☆☆

☆☆☆☆ indicates this filter set was specifically optimized for this fluorophore.

☆☆☆☆ indicates an excellent spectral match between fluorophore and filter set that should result in nearly ideal performance in most situations.

☆☆ indicates a good match between fluorophore and filter set, with actual performance dependent on other experimental conditions.

Red	
Fluorophore	Compatibility
2-dodecylresorufin-lipid	☆☆
5-carboxynaphthofluorescein (pH 10)	☆☆
5-ROX (carboxy-X-rhodamine)	☆☆☆☆

3-ROX (carboxy-X-rodamine)	★ ★ ★ ★
7-AAD	★ ★ ★
<b>Alexa Fluor® 568</b>	★ ★ ★ ★
<b>Alexa Fluor® 594</b>	★ ★ ★ ★
Alexa Fluor® 660	★ ★
AsRed 2	★ ★ ★
ATTO 565	★ ★
ATTO 590	★ ★ ★
ATTO 594	★ ★
<b>BOBO™_3</b>	★ ★ ★ ★
<b>BODIPY TR-X phalloidin</b>	★ ★ ★ ★
<b>Calcium Crimson</b>	★ ★ ★ ★
Carboxynaphthofluorescein	★ ★ ★
CellTrace BODIPY TR methyl ester	★ ★ ★
<b>CellTracker Red CMTPX</b>	★ ★ ★ ★
Cy3.5™	★ ★
DDAO	★ ★ ★
DY-590	★ ★ ★
DY-630	★ ★
<b>DyLight 594</b>	★ ★ ★ ★
FluoSpheres Crimson fluorescent microspheres	★ ★
<b>FluoSpheres Red fluorescent microspheres</b>	★ ★ ★ ★
FM 4-64	★ ★
HcRed1	★ ★ ★
<b>HCS LipidTOX Red neutral lipid stain</b>	★ ★ ★ ★
<b>HCS LipidTOX Red phospholipidosis</b>	★ ★ ★ ★
HiLyte Fluor™ 594	★ ★ ★
KFP-Red	★ ★ ★
<b>LDS 751</b>	★ ★ ★ ★
LIVE-DEAD Fixable Red Dead Cell Stain	★ ★
LysoTracker Red	★ ★
mApple	★ ★
<b>mCherry</b>	★ ★ ★ ★
MitoTracker™ Red	★ ★ ★
<b>mPlum</b>	★ ★ ★ ★
<b>mRFP1</b>	★ ★ ★ ★
mRuby	★ ★ ★
mStrawberry	★ ★
Nile blue-EtOH	★ ★
Nile red-phospholipid	★ ★ ★
Orange 552	★ ★
PerCP	★ ★
Propidium Iodide (PI)	★ ★
Qdot® 605 Nanocrystals	★ ★
Qdot® 625 Nanocrystals	★ ★
Qdot® 655 Nanocrystals	★ ★
Qdot® 705 Nanocrystals	★ ★
Qdot® 800 Nanocrystals	★ ★
<b>ReAsH-CCPGCC</b>	★ ★ ★ ★
<b>Red 580</b>	★ ★ ★ ★
Rhodamine Red-X	★ ★
<b>SNARF (carboxy) 514 Excitation pH 9</b>	★ ★ ★ ★
<b>SNARF-1 488nm (pH 9.0)</b>	★ ★ ★ ★
<b>SNARF-1 514nm (pH 9.0)</b>	★ ★ ★ ★
SpectrumRed	★ ★
Sulforhodamine 101-EtOH	★ ★
SYTO 17	★ ★
SYTO 61	★ ★
Texas Red dextran	★ ★ ★
Texas Red DAPI	★ ★ ★ ★

Texas Red DMFC	☆☆☆☆
Texas Red-X®	☆☆☆☆
TurboFP635(Katushka)	☆☆☆☆
X-Rhod-1 Indicator	☆☆☆☆
YO-PRO-3	☆☆
YOYO-3	☆☆

## Technical Information

Topic	Description
<a href="#">High Performance Microscopy</a>	An overview of high performance microscopy, including solutions from Semrock and additional learning resources.
<a href="#">Spectral Modeling in Fluorescence Microscopy</a>	Discusses various sources of noise in fluorescence microscopy and how to maximize signal-to-noise ratios using software, sample preparation and optical filter selection
<a href="#">New Optical Filters Improve High-Speed Multicolor Fluorescence Imaging</a>	Turan Erdogan, PhD, Semrock Inc., BioPhotonics, March 2006 Compares benefits and drawbacks of full multiband, pinkel and sedat filter sets for high-speed multicolor fluorescence imaging
<a href="#">Multiband Filter Set Terminology</a>	Compares benefits and drawbacks of full multiband, pinkel and sedat filter sets
<a href="#">Orientation of Filters in a Microscope</a>	A guide to properly orienting Semrock filters based on the filter markings.
<a href="#">Introduction to Fluorescence Filters</a>	Shows how optical filters are used in a traditional fluorescence microscope and describes important factors to consider when choosing optical filters.
<a href="#">Filter Reliability</a>	Compares the performance and reliability of hard coated filters to traditional soft-coated filters and provides information about the testing standards for Semrock filters
<a href="#">Cube Assembly Instructions</a>	PDF and video instruction for installing filters into popular filter cubes
<a href="#">Cleaning Optical Filters</a>	Instructions for cleaning hard coated optical filters