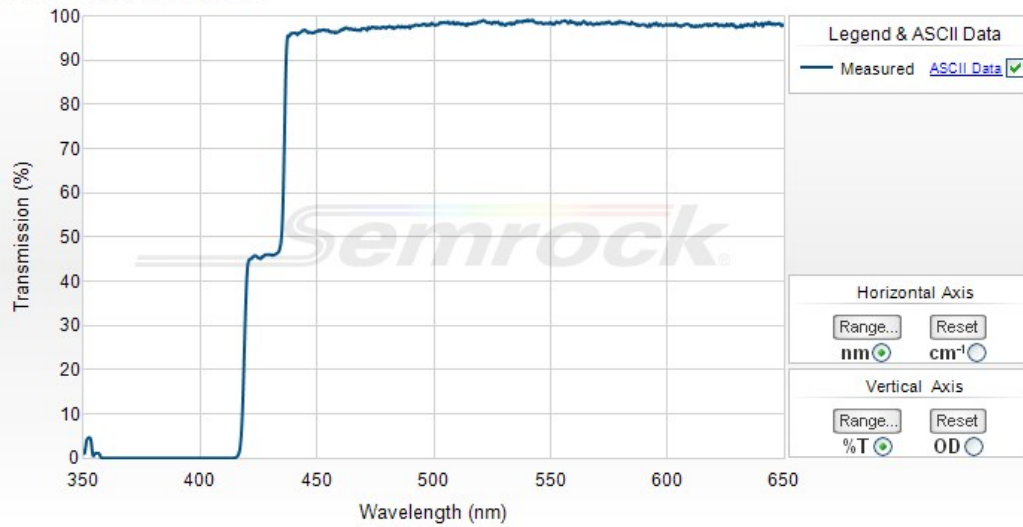


## 427 nm edge LaserMUX™ single-edge laser-flat dichroic beamsplitter

Part Number: LM01-427-25



### Semrock, Inc

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(within US and Canada)

Your filter spectrum may differ slightly from the typical spectrum above, but is certified to meet the optical specifications noted below.



### 427 nm edge LaserMUX™ single-edge laser-flat dichroic beamsplitter

LaserMUX filters are designed to efficiently multiplex or demultiplex (combine or separate) laser beams at a 45° angle of incidence. These ultralow-autofluorescence filters are ideally suited for multi-laser fluorescence imaging and measurement applications such as laser microscopy and flow cytometry.

Part Number	Size	Price <sup>1</sup>	Stock Status
LM01-427-25	25 mm x 3.5 mm	\$235	In Stock

Don't see a size you need? Contact us for custom sizing – available in less than a week (sizing fee applies).

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
Reflection Band 1	R <sub>avg</sub> > 98% 372.0 – 415.0 nm
Reflection Band 1 (p-pol)	R <sub>abs</sub> > 96% for laser wavelengths
Reflection Band 1 (s-pol)	R <sub>abs</sub> > 99% for laser wavelengths
Edge Wavelength 1	427 nm
Transmission Band 1	T <sub>avg</sub> > 95% 439.0 – 647.1 nm
Transmission Band 1 (p-pol)	T <sub>abs</sub> > 95% for transmitted laser wavelengths
Transmission Band 1 (s-pol)	T <sub>abs</sub> > 94% for transmitted laser wavelengths

### General Filter Specifications

Specification	Value
Angle of Incidence	45 degrees with a shift of 0.35%/degree (40 – 50 degrees)
Cone Half-angle	0 degrees
Optical Damage Rating	1 J/cm <sup>2</sup> @ 532 nm (10 ns pulse width)
Flatness	<a href="#">Laser Flat</a>
Steepness	Standard
Transition Width (%)	5.8%
Reflected Laser Wavelengths	375 +/- 3, 405 +/- 5 nm
Transmitted Laser Wavelengths	440 +/- 1, 457.9, 473 +/- 0, 488 +/- 2, 514.5, 515, 532, 543.5, 561.4, 568.2, 594.1, 632.8, 635 +/- 7, 647.1 nm
Non-collimated Light Performance	The dichroic beamsplitter's edge exhibits a small "blue shift" (shift toward shorter wavelengths). Even for Cone Half Angles as large as 15° at normal incidence, the blue shift is only several nm.
Effective Index	1.82

### Physical Filter Specifications (applies to standard sized parts; contact us regarding other sizes)

Specification	Value
Transverse Dimensions (Diameter)	25 mm
Transverse Tolerance (mounted)	+ 0.0 / - 0.1 mm
Filter Thickness (Mounted)	3.5 mm
Filter Thickness Tolerance (Mounted)	± 0.1 mm
Clear Aperture	≥ 22 mm
Scratch-Dig	60-40
Substrate Thickness (unmounted)	2.0 mm
Substrate Thickness Tolerance (unmounted)	± 0.1 mm

For optimal filter performance, when using the filter as a:

- MUX: Arrow points toward outgoing transmitted & combined laser beams
- DEMUX: Arrow points toward incoming combined beams and outgoing reflected beam

Orientation