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TECHSPEC® 427nm, 50mm Diameter, Dichroic Laser Beam Combiner



TECHSPEC® Dichroic Laser Beam Combiners

Stock **#86-396** **5 In Stock**

⊖ 1 ⊕ **\$1,008⁰⁰**

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Volume Pricing	
Qty 1-5	\$1,008.00 each
Qty 6-25	\$856.80 each
Qty 26-49	\$796.60 each
Need More?	Request Quote

Product Downloads

General

Dichroic Filter **Type:**

Physical & Mechanical Properties

50.00 +0.0/-0.1 **Diameter (mm):**

45.3 **Clear Aperture CA (mm):**

Construction:
Mounted in Black Anodized Ring

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

Substrate Thickness (mm):
2

Optical Properties

Angle of Incidence (°):
45

Cut-On Wavelength (nm):
427.00

Substrate:
[Fused Silica](#) (Corning 7980)

Coating:
Hard Coated

Reflected Laser Wavelength (nm):
375, 405

Reflection (%):
>98

Reflection Wavelength (nm):
372 - 415

Surface Quality:
60-40

Transmission (%):
>95

Transmission Wavelength (nm):
439 - 647.1

Transmitted Laser Wavelength (nm):
440, 457.9, 473, 488, 514.5, 532, 543.5, 561.4, 568.2, 594.1, 632.8, 635, 647.1

Transmitted Wavefront, RMS:
<1λ

Wavelength Range (nm):
372 - 647

Threading & Mounting

Mount Thickness (mm):
3.5 ± 0.1

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](#)

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

- Polarization Insensitive
- Hard Sputtered Coating
- Multiple Sizes Available

TECHSPEC® Dichroic Laser Beam Combiners are designed to efficiently combine or separate multiple laser beams at a 45° angle of incidence. The filters feature greater than 98% reflection and greater than 95% transmission at popular laser lines, yielding exceptionally low loss. These filters are available in a 12.5, 25, and 50mm diameters, with a range of cut-on, reflection, and transmission wavelengths. These filters are ideal for multi-laser fluorescence imaging and measurement applications, including laser microscopy and flow cytometry. TECHSPEC® Dichroic Laser Beam Combiners are constructed from low autofluorescence substrates with hard sputtered coatings. These filters are ideal for multi-laser fluorescence imaging and measurement applications, including laser microscopy and flow cytometry.

Note: These filters are optimized for high spectral performance rather than high Laser Induced Damage Thresholds (LIDT). A typical LIDT for these filters is 1 J/cm² @ 532nm, 10ns. Please [contact us](#) if you require a filter with a higher LIDT value.



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