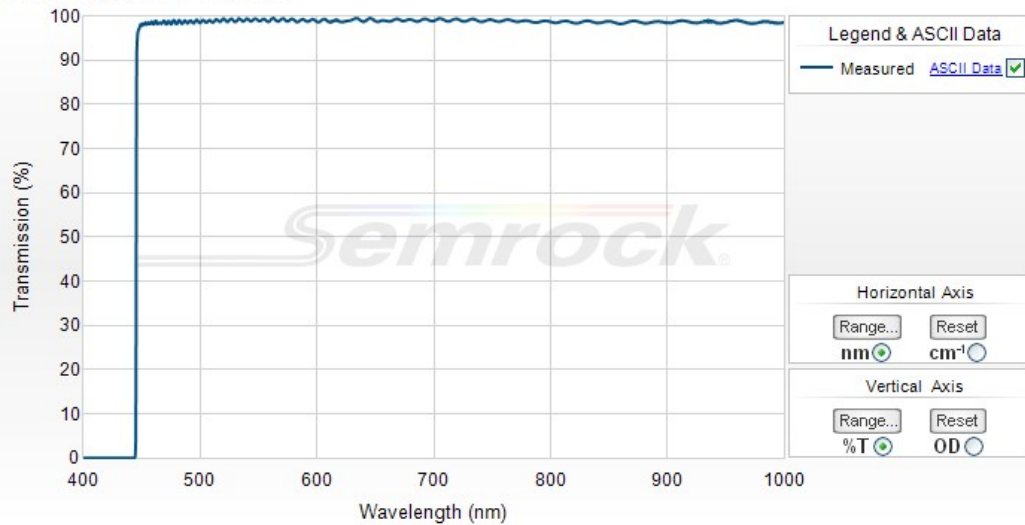


442 nm RazorEdge® ultrasteep long-pass edge filter

Part Number: LP02-442RU-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.



442 nm RazorEdge® ultrasteep long-pass edge filter

RazorEdge filters allow you to see the weakest signals closer to the laser line, especially for Raman spectroscopy applications. With their deep laser-line blocking, ultrawide and low-ripple passbands, hard-coated reliability, and high laser damage threshold, they offer lasting performance and value.

Part Number	Size	Price ¹	Stock Status
LP02-442RU-25	25 mm x 3.5 mm	\$695	In Stock
LP02-442RU-50	50 mm x 3.5 mm	\$1,985	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
Transmission Band 1	T _{avg} > 93% 447.3 – 996.1 nm
Edge Wavelength 1	445 nm
Blocking Band 1	OD _{abs} > 6 441.6 nm
Blocking Band 2	OD _{avg} > 6 356 – 441.6 nm (typical)
Transition Width (nm)	4.4 nm
Transition Width (cm ⁻¹)	224 cm ⁻¹
Edge Steepness (%)	0.5%
Edge Steepness (nm)	2.2 nm
Edge Steepness (cm ⁻¹)	112.7 cm ⁻¹

General Filter Specifications

Specification	Value
Laser Wavelength 1	441.6 nm
Angle of Incidence	0 ± 2 degrees
Cone Half-angle	5 degrees
Optical Damage Rating	0.5 J/cm ² @ 266 nm (10 ns pulse width), 1 J/cm ² @ 532 nm (10 ns pulse width)
Effective Index	1.86

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

Specification	Value
Transverse Dimensions (Diameter)	25 mm
Transverse Dimensions 2 (Diameter)	50 mm
Transverse Tolerance (mounted)	+ 0.0 / - 0.1 mm
Filter Thickness (Mounted)	2.5 mm

Filter Thickness (mounted)	3.5 mm
Filter Thickness Tolerance (Mounted)	± 0.1 mm
Clear Aperture	≥ 22 mm
Clear Aperture 2	≥ 45 mm
Scratch-Dig	60-40
Substrate Type	Fused Silica
Substrate Thickness (unmounted)	2.0 mm
Substrate Thickness Tolerance (unmounted)	± 0.1 mm
Orientation	Arrow on ring indicates preferred direction of propagation of light