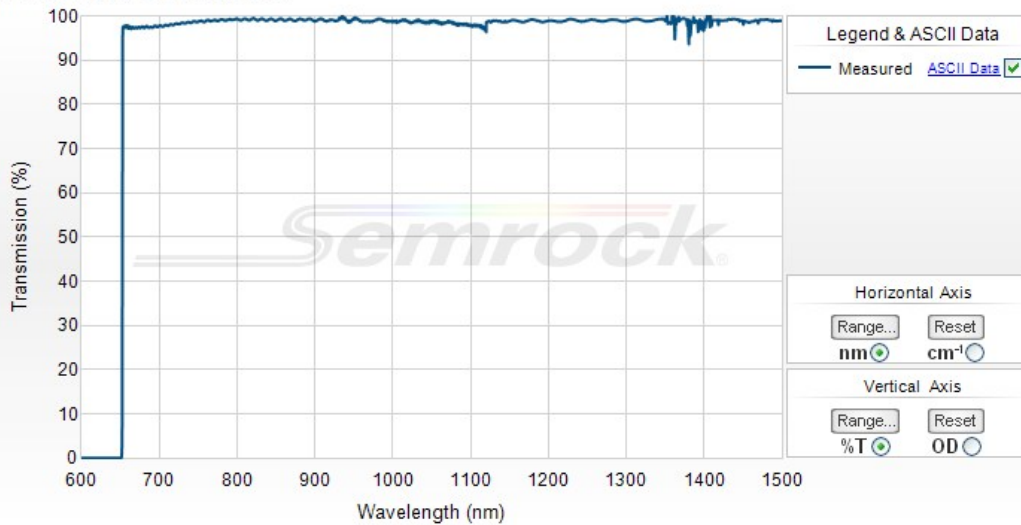


## 647 nm RazorEdge® ultrasteep long-pass edge filter

Part Number: LP02-647RU-25



**Semrock**  
A Unit of IPX Corporation

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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.

Note that the few % dip in transmission at about 1390 nm is a small absorption loss associated with a vibrational overtone of OH bonds in the fused silica substrate of this optical filter.



### 647 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 <sup>1</sup>	Stock Status
LP02-647RU-25	25 mm x 3.5 mm	\$695	In Stock
LP02-647RU-50	50 mm x 3.5 mm	\$1,985	2nd Day Ship

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 <sub>avg</sub> > 93% 655.5 – 1459.6 nm
Edge Wavelength 1	652.7 nm
Blocking Band 1	OD <sub>abs</sub> > 6 647.1 nm
Blocking Band 2	OD <sub>avg</sub> > 6 525 – 647.1 nm (typical)
Transition Width (nm)	6.5 nm
Transition Width (cm <sup>-1</sup> )	153 cm <sup>-1</sup>
Edge Steepness (%)	0.5%
Edge Steepness (nm)	3.2 nm
Edge Steepness (cm <sup>-1</sup> )	76.9 cm <sup>-1</sup>

### General Filter Specifications

Specification	Value
Laser Wavelength 1	647.1 nm
Angle of Incidence	0 ± 2 degrees
Cone Half-angle	5 degrees
Optical Damage Rating	0.5 J/cm <sup>2</sup> @ 266 nm (10 ns pulse width), 1 J/cm <sup>2</sup> @ 532 nm (10 ns pulse width)
Effective Index	1.8

### 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)	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