

ODiate® Raman Edge Filters

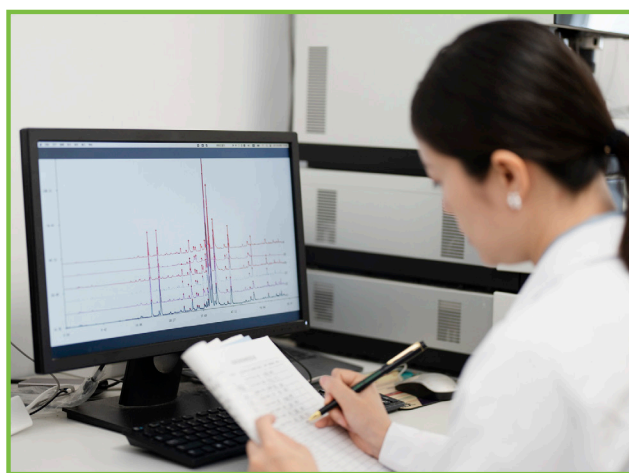
Molecular Analysis and Raman Spectroscopy



Newport™ ODiate® Raman Edge Filters are precision-engineered to deliver outstanding performance in Raman spectroscopy by effectively blocking intense Rayleigh scatter while efficiently transmitting Raman-shifted light. Featuring ultra-deep optical density (OD) blocking, steep edge transitions, and high in-band transmission, these filters enable the detection of low-wavenumber Raman signals with superior sensitivity and improved signal-to-noise ratio. This makes them ideal for integration into research-grade systems, industrial process analyzers, and portable Raman instruments.

Raman spectroscopy is a powerful analytical technique for investigating molecular structures, identifying materials, and monitoring chemical processes. Its effectiveness depends heavily on the optical components that isolate weak Raman signals from background noise, particularly the ability to eliminate the overwhelming Rayleigh-scattered light generated at the excitation wavelength. ODiate Edge Filters are specifically designed to address this challenge. Blocking levels reach

$OD \geq 6$, which provides the sharp spectral discrimination required to suppress the excitation source and reveal the finer details of Raman-shifted emissions. Newport ODiate Raman Edge Filters combine advanced optical performance with durable construction, enabling clearer, more sensitive measurements across diverse applications, helping researchers and manufacturers achieve greater accuracy and efficiency.



Available Laser Lines

488 nm

532 nm

632.8 nm

785 nm

Additional
edge filters
coming soon!

RAMAN SPECTROSCOPY



Applications

- Confocal Raman Microscopy
- Portable Raman Analyzers
- Industrial Raman Probes
- Research-Grade Raman Spectroscopy

Performance Advantages

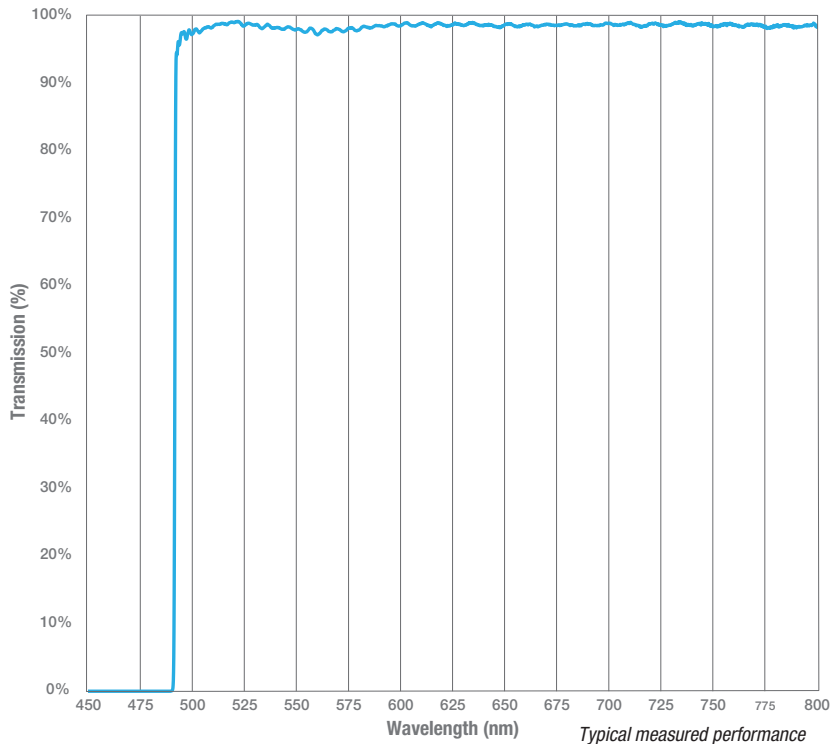
- Edge Steepness $\leq 0.5\%$
- $\geq OD 6$ blocking of laser line
- $> 90\%$ T_{abs} and $\geq 93\%$ T_{avg} of Raman-shifted light
- Standard and custom configurations available

Raman Filter	Laser Line	Blocking Range	Edge Steepness	Transmission Range
OD8-RLP488-B	488 nm	394-488 nm	2.4 nm / 101.9 cm ⁻¹	494.1-1100 nm
OD8-RLP532-B	532 nm	430-532 nm	2.7 nm / 93.5 cm ⁻¹	538.7-1200 nm
OD8-RLP633-B	632.8 nm	513-633 nm	3.2 nm / 78.6 cm ⁻¹	640.8-1400 nm
OD8-RLP785-B	785 nm	638-785 nm	3.9 nm / 63.4 cm ⁻¹	795-1700 nm

Individual filter specifications are available online. Contact Newport to customize sizes.

Raman Edge Common Specifications

Optical		Mechanical	
Part Numbering	Laser Line & Size Code	Housed Diameter	25.0 mm +0.0/-0.1 mm
Transmission	$T_{abs} \geq 90\%$ and $T_{avg} \geq 93\%$ over transmission range	Substrate Thickness Ring Thickness	2.0 mm ± 0.1 mm 3.5 mm ± 0.1 mm
Laser Line Blocking	$OD_{abs} > 6$ at laser line	Scratch-Dig	60-40 over 21 mm Clear Aperture
Blocking Range	$OD_{avg} \geq 6$ over blocking range	Substrate Material	Fused Silica
Angle of Incidence	0° ± 2°, random polarization	Orientation Arrow	On Ring – Indicates Direction of Light Propagation
Cone Half Angle	< 7°	Part Number	Marked on edge of the ring



— Raman LP Filter # OD8-RLP488-D



Scan QR Code for more information

