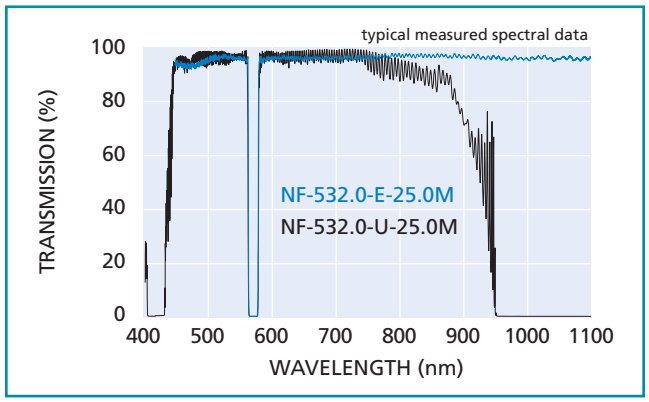
Semrock StopLine® Single Notch Filters

Semrock StopLine® single-notch filters offer high transmission over wide passbands. They offer deep laser-line blocking with OD > 6 for maximum laser rejection, and rejected light is reflected for best alignment and stray light control. Ideal for Raman spectroscopy, laser-based fluorescence instruments and biomedical laser systems.



SPECIFICATIONS: Semrock StopLine® Single Notch Filters

Laser Line Blocking	Optical Density > 6
50% Notch Bandwidth	
Typical	NBW=55 × 10^{-6} × λ_c^2 + 14 × 10^{-3} × λ_c − 5.9 [e.g.,17 nm (600cm^{-1}) for a 532.0-nm filter]
Maximum	<1.1 × NBW
90% Notch Bandwidth	<1.3 × NBW
Passband	
Average Transmission	>90%
Transmission Ripple	<2.5%
Angle of Incidence	0.0° ± 5.0°
Angle Tuning Range*	− 1.0 % of laser wavelength (e.g., − 5.3 nm or + 190 cm^{-1} for a 532-nm filter)
Coating Technology	"Hard" ion-beam sputtered
Clear Aperture	≥ 22 mm
Damage Threshold	1 J/cm^2, 10 nsec, 20 Hz @ 532 nm
Optical Material	Fused silica with ultralow autofluorescence
Diameter	25.0 mm + 0/ − 0.15 mm
Thickness	3.5mm ± 0.1 mm
Surface Quality	60-40 scratch and dig
Mounting	Black-anodized aluminum ring

**For small angles θ the wavelength shift near the laser wavelength is $\Delta\lambda = 5.0 \times 10^{-5} \times \lambda_c \times \theta^2$ and the wavenumber shift is Δ(wavenumbers)=500 × θ^2/ λ_c where λ_c is the center wavelength in nm.*

Semrock's new "E-grade" StopLine® notch filter offers ultrawide transmission up to 1600.0 nm. The renowned "U-grade" StopLine® notch filter offers deep rejection for 532.0 nm as well as efficent rejection of the primary Nd:YAG wavelength.

From our Shelves to Your Lab – Standard Products for *Fast* Delivery

Semrock StopLine® Single Notch Filters

λ_c (nm)	BLUE SHIFT Passband Range T_{avg} > 80% λ (nm)	BLUE SHIFT Passband Range T_{avg} > 93% λ (nm)	RED SHIFT Passband Range T_{avg} > 93% λ (nm)	Typical 50% Notch Bandwidth	Laser Line Blocking	PART NUMBER
405.0	330.0–380.0	380.0–395.3	414.7–1600.0	9.0	OD > 6	NF-405.0-E-25.0M
488.0	350.0–400.0	400.0–472.6	503.4–1600.0	14.0	OD > 6	NF-488.0-E-25.0M
514.5	350.0–400.0	400.0–497.1	531.9–1600.0	16.0	OD > 6	NF-514.5-E-25.0M
532.0	—	399.0–513.2**	550.8–709.3**	17.0	OD > 6	NF-532.0-U-25.0M
532.0	350.0–400.0	400.0–513.2	550.8–1600.0	17.0	OD > 6	NF-532.0-E-25.0M
561.0	350.0–400.0	400.0–540.2	582.6–1600.0	19.0	OD > 6	NF-561.0-E-25.0M
594.0	350.0–400.0	400.0–570.1	618.1–1600.0	21.8	OD > 6	NF-594.0-E-25.0M
633.0	350.0–400.0	400.0–605.3	660.3–1600.0	25.0	OD > 6	NF-632.8-E-25.0M
658.0	350.0–400.0	400.0–628.2	687.8–1600.0	27.0	OD > 6	NF-658.0-E-25.0M
785.0	350.0–400.0	400.0–742.1	827.9–1600.0	39.0	OD > 6	NF-785.0-E-25.0M
808.0	350.0–400.0	400.0–762.5	853.5–1600.0	41.0	OD > 6	NF-808.0-E-25.0M

*** Transmission for the NF-532.0-U-25.0M is > 90%$_{avg}$ over passband*