

BARR CUSTOM, STEEP EDGE LASER REJECTION FILTERS

Overview:

Barr Custom Steep Edge Filters are designed for laser applications where deep attenuation of laser radiation is required with sharp cut-on slope to afford high transmission very close to the laser line. Filters of this type are typically used in Raman Spectroscopy where the Rayleigh line must be effectively suppressed while transmitting Raman scattering separated as closely as 100 cm⁻¹ from it.

- Ideal for Laser Raman Applications
- Offered in Custom Sizes and Shapes
- Robust Environmental Durability Characteristics



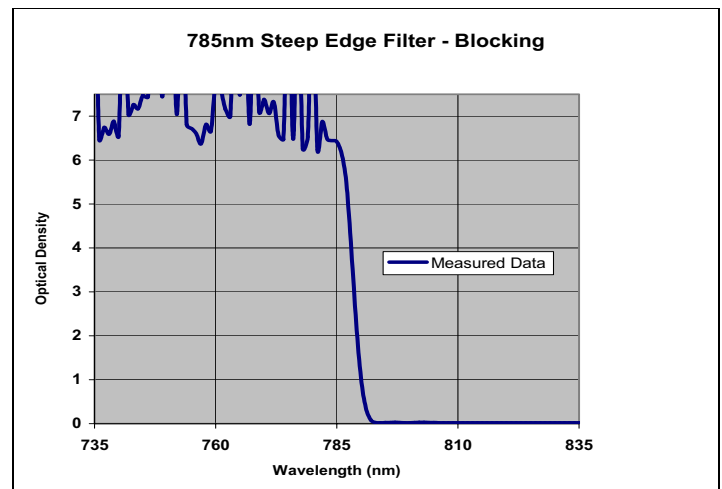
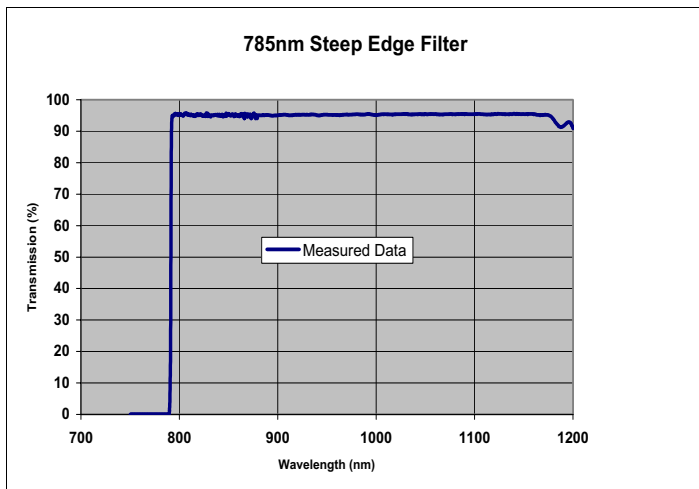
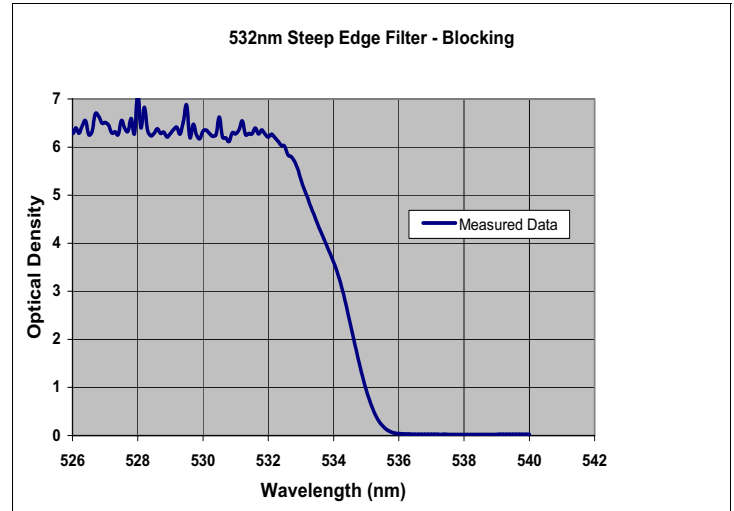
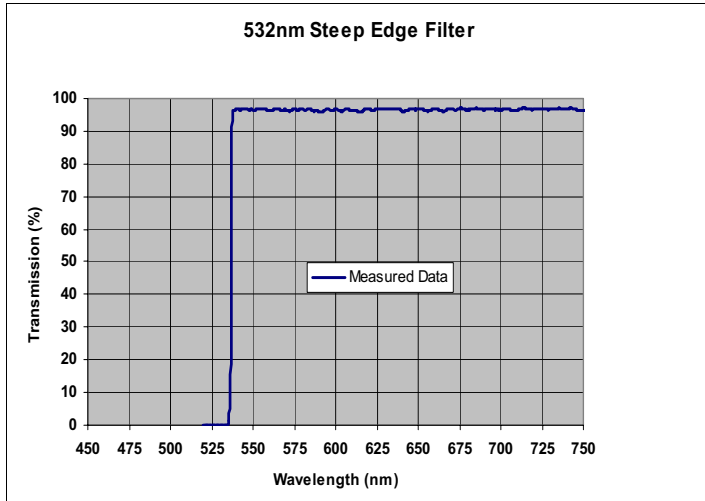
Representative Spectral Properties:

Property	Specification
Edge Steepness [(λ @ 50%T - Laser λ) / Laser λ] x 100	< 1% x Laser λ
Blocking Density	OD 6 Minimum @ Laser λ
Transmission Passband	> 1.4 x Laser λ
Transmission	> 90% Ave T%
Temperature Coefficient	< [(4 ppm) x (Center λ)] / deg C

Representative Physical Properties:

Property	Specification
Coating Type	Durable, Stable Oxide
Substrate Material	UV-grade Fused Silica
Transmitted Wavefront Error	typical value: < 1.25 wave peak-to-valley @ 633nm
Mounting Configuration	Ring-mounted, or unmounted rounds or squares
Clear Aperture	85% nominal
Surface Quality	80/50 or 60/40 Scratch/Dig within Clear Aperture as Specified
Environmental Durability (Temperature and Humidity)	MIL-STD-810F
Physical Durability (Adhesion, Abrasion, Solubility)	MIL-C-48497A

Representative Measured Transmission and Blocking Spectra:



BARR

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