Optics

Optometrics
A Dynasil Company

LASER COMPONENTS

Edge Filters

- Short Pass Filters Every 50 nm from 450 nm to 1000 nm
- Long Pass Filters Every 50 nm from 500 nm to 1500 nm
- Custom Filter Specifications Provided Upon Request
- Ring Mounted
- Scribed and Sealed for Moisture Protection
- Use in Combination for Custom Filtering

For Applications In:
Emission Filters in Fluorescence Applications
Eliminate Unwanted Radiation in Raman Spectrosopy
Astronomical Applications
Order Sorting

Wavelength Selection Solutions

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Edge Filters

Optometrics is pleased to announce the launch of the newest addition to our optical filter line, e.g. Short Pass and Long Pass filters, collectively called Edge filters.

A Short Pass or Short Wave Pass filter ("SP") is a filter that transmits at shorter wavelengths and rejects longer wavelengths. By contrast, a Long Pass or Long Wave Pass filter ("LP") is one that transmits at longer wavelengths and rejects shorter wavelengths. By design, the transition in both SP and LP filters between the 50% cut-off or cut-on to rejection is quite sharp. This makes it much easier to separate excitation from emitted wavelengths without interfering with wavelengths of interest. SP and LP filters are useful in applications where spectral noise reduction is important or for isolating a particular region of the spectrum. They can be used as emission filters in fluorescence applications, to eliminate any unwanted radiation, in Raman spectroscopy, as order sorting filters, as well as in astronomical applications. They are also used in laser-induced fluorescence to isolate source radiation.

Features

- Short Pass filters every 50 nm from 450 nm to 1000 nm
- Long Pass filters every 50 nm from 500 nm to 1500 nm
- Ring mounted
- Scribed and sealed for moisture protection
- Use in combination for custom filtering
- Fine tune cut-on or cut-off wavelengths by changing angle of incidence

General Specifications

Dimensions & Tolerances

25.4 mm diameter .....+0.00, -0.2 mm
12.7 mm diameter ..... +0.00, -0.25 mm

Thickness ..... </= 6.4 mm

Clear Aperture

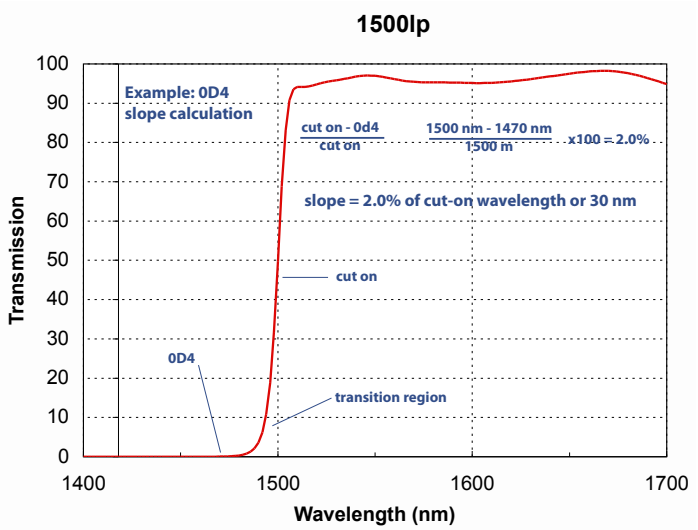
25.4 mm diameter .....>/= 21.4 mm
12.7 mm diameter ..... >/= 8.7 mm

Mounting .....Black anodized aluminum ring

Scratch/Dig..... 80/50 per Mil-O-13830A

Substrate material.....Borofloat

Operating temperature range.....-20° C to 75° C



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Edge Filters

Long Pass Filters: Standard Specifications

Transmission Region ..... Cut-on to 2200 nm minimum

Minimum Peak Transmission

500-1050 nm 80%
>1050 nm 70%

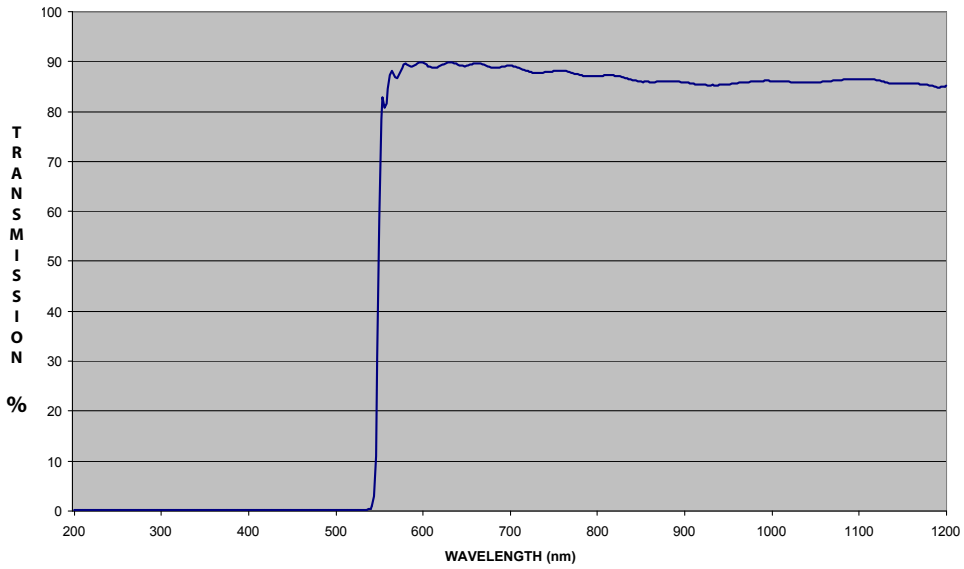
Cut-On Tolerance ($\Delta\lambda$ @ 50% of peak)

≤ 750 nm ..... ± 3 nm
> 1500 nm ..... ± 10 nm

Rejection ..... ≥ 0.01% absolute 200 nm to cut-on

Cut-On Slope ..... 3%, OD=0.3 to OD=4.0

Typical Long Pass Filter Curve (Cut-on at 550 mm)



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LASER COMPONENTS

Edge Filters

Long Pass Filters: Ordering Information

CUT-ON WAVELENGTH (nm)	25 mm Dia. (Mounted)	12.7 mm Dia. (Mounted)
500	2-0850	2-0875
550	2-0851	2-0876
600	2-0852	2-0877
650	2-0853	2-0878
700	2-0854	2-0879
750	2-0855	2-0880
800	2-0856	2-0881
850	2-0857	2-0882
900	2-0858	2-0883
950	2-0859	2-0884
1000	2-0860	2-0885
1050	2-0861	2-0886
1100	2-0862	2-0887
1150	2-0863	2-0888
1200	2-0864	2-0889
1250	2-0865	2-0890
1300	2-0866	2-0891
1350	2-0867	2-0892
1400	2-0868	2-0893
1450	2-0869	2-0894
1500	2-0870	2-0895
PRICE	POA	POA

Custom OEM Filter Specifications Provided Upon Request

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LASER COMPONENTS

Edge Filters

Short Pass Filters: Standard Specifications

Transmission Region ..... Cut-off to 400nm or $0.7\lambda_c$
(whichever is greater)

Minimum Peak Transmission

≤ 800 nm 80%
> 800 nm 70%

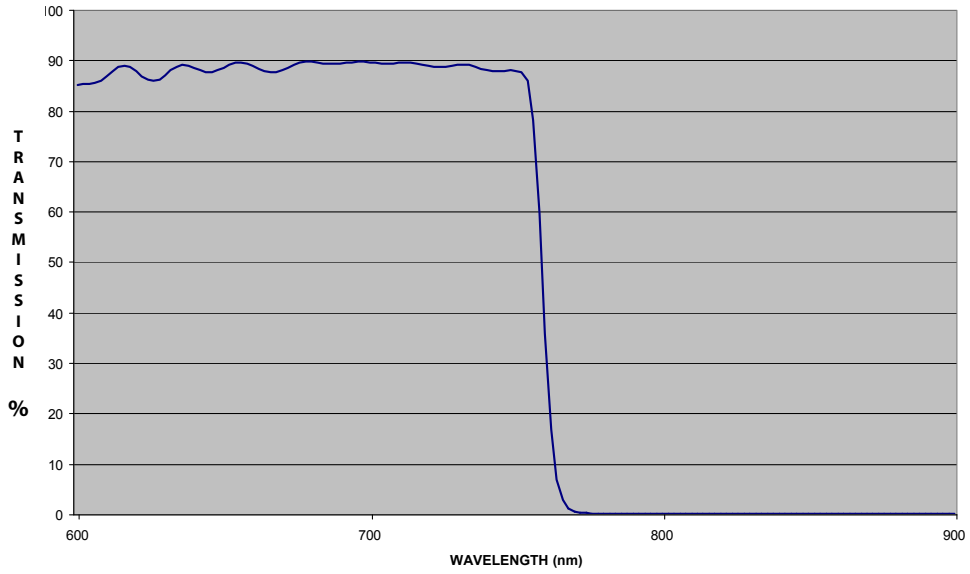
Cut-On Tolerance ($\Delta\lambda$ @ 50% of peak)

≤ 750 nm ..... ± 3 nm
> 750 nm ..... ± 10 nm

Rejection Region ..... 0.01% absolute, 0.0001% avg.
(1.3 times cut-off)

Cut-On Slope ..... 3%, OD=0.3 to OD=4.0

Typical Short Pass Filter Curve (Cut-on at 770 mm)



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Edge Filters

Short Pass Filters: Ordering Information

CUT-ON WAVELENGTH (nm)	25 mm Dia. (Mounted)	12.7 mm Dia. (Mounted)
450	2-0800	2-0830
500	2-0801	2-0831
550	2-0802	2-0832
600	2-0803	2-0833
650	2-0804	2-0834
700	2-0805	2-0835
750	2-0806	2-0836
800	2-0807	2-0837
850	2-0808	2-0838
900	2-0809	2-0839
950	2-0810	2-0840
1000	2-0811	2-0841
PRICE	POA	POA

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