

# Edge Filters

## Edge Filters

Often referred to as long wave pass (LWP) and short wave pass (SWP) filters, edge filters provide a well-defined transition between reflecting and transmitting regions. Essentially a modified quarter-wave stack, the filters use interference effects rather than absorption to isolate their spectral bands. Because edge filters will shift shorter with an increase in the angle of incidence, they are a good choice for fine-tuning the cut-on/cut-off wavelength. With their durable, first-surface dielectric coatings, Andover's edge filters are built to withstand the normal cleaning and handling required by any high-quality optical component.

- Useful for redirecting a particular band of light
- Provide steeper transition than color glass filters
- Offer coverage over the 400-1000nm range

## GENERAL SPECIFICATIONS

Thickness	4.0mm maximum
Size Tolerance	+0.0mm/-0.5mm
Min. Clear Aperture	85% of outside dimension
Substrate Material	Glass (Note: BK-7 or Borofloat available as an option for higher Tx)
Flatness	3-5 waves per 25mm
Surface Quality	80/50 per MIL-C-48497A
Humidity and Abrasion	Per MIL-C-675A
Operating Temperature	-50°C to +100°C
Cut-on/cut-off Slopes	6% maximum (10% for 300nm filter)
Cut-on/cut-off Tolerance	±10nm from 400nm - 1000nm ±5nm from 300nm - 375nm
Mechanical	Unmounted

Optional: Mounted in threaded ring - see pg 57 for thread sizes

## Applications

Fluorescence  
Photometry  
Color Enhancement  
and Combining



## TRANSMISSION

Long Wave Pass	85% average from the 50% cut-on point to 2000nm
Short Wave Pass	85% average from the 50% cut-off point to 0.6 x the 50% cut-off point

(Note: With the exception of the 400nm filter, all SWP filters will drop off in transmission at wavelengths under 425nm.)

## REJECTION

Long Wave Pass	99% or greater from 0.9 x the 50% point to the ultraviolet
Short Wave Pass	99% or greater from 1.07 x the 50% point to 1.25 x the 50% point
Effective Index of Refraction (n*)	1.7 (approximately)

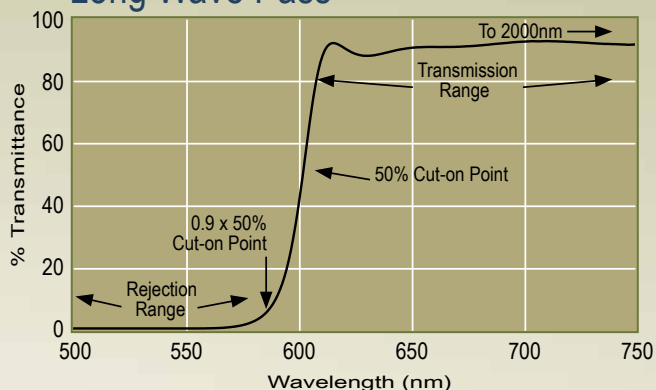
VISIBLE

Size, Shape & Part Number			
50% Point	25mm Ø ○	50mm Ø ○	50mm SQ □
300nm	300FH90-25	300FH90-50	300FH90-50S
325nm	325FH90-25	325FH90-50	325FH90-50S
350nm	350FH90-25	350FH90-50	350FH90-50S
375nm	375FH90-25	375FH90-50	375FH90-50S
400nm	400FH90-25	400FH90-50	400FH90-50S
450nm	450FH90-25	450FH90-50	450FH90-50S
500nm	500FH90-25	500FH90-50	500FH90-50S
550nm	550FH90-25	550FH90-50	550FH90-50S
600nm	600FH90-25	600FH90-50	600FH90-50S
650nm	650FH90-25	650FH90-50	650FH90-50S
700nm	700FH90-25	700FH90-50	700FH90-50S

NEAR INFRARED

Size, Shape & Part Number			
50% Point	25mm Ø ○	50mm Ø ○	50mm SQ □
750nm	750FH90-25	750FH90-50	750FH90-50S
800nm	800FH90-25	800FH90-50	800FH90-50S
850nm	850FH90-25	850FH90-50	850FH90-50S
900nm	900FH90-25	900FH90-50	900FH90-50S
950nm	950FH90-25	950FH90-50	950FH90-50S
1000nm	100FH90-25	100FH90-50	100FH90-50S

Long Wave Pass



VISIBLE

Size, Shape & Part Number			
50% Point	25mm Ø ○	50mm Ø ○	50mm SQ □
400nm	400FL07-25	400FL07-50	400FL07-50S
450nm	450FL07-25	450FL07-50	450FL07-50S
500nm	500FL07-25	500FL07-50	500FL07-50S
550nm	550FL07-25	550FL07-50	550FL07-50S
600nm	600FL07-25	600FL07-50	600FL07-50S
650nm	650FL07-25	650FL07-50	650FL07-50S
700nm	700FL07-25	700FL07-50	700FL07-50S

NEAR INFRARED

Size, Shape & Part Number			
50% Point	25mm Ø ○	50mm Ø ○	50mm SQ □
750nm	750FL07-25	750FL07-50	750FL07-50S
800nm	800FL07-25	800FL07-50	800FL07-50S
850nm	850FL07-25	850FL07-50	850FL07-50S
900nm	900FL07-25	900FL07-50	900FL07-50S
950nm	950FL07-25	950FL07-50	950FL07-50S
1000nm	100FL07-25	100FL07-50	100FL07-50S

Short Wave Pass

