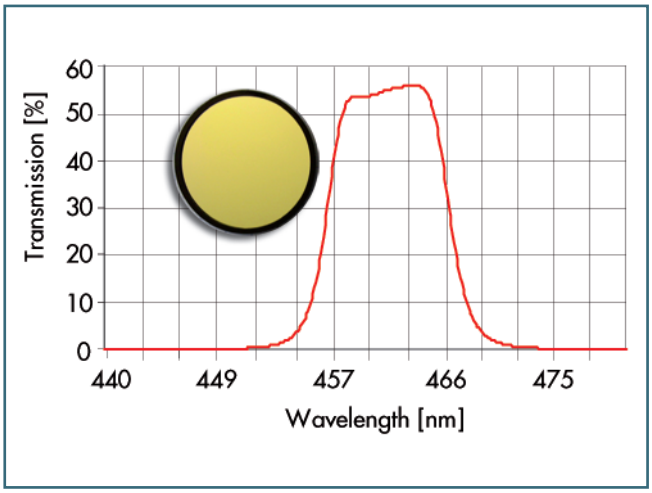
Mercury and analytical line filters

- *Isolated atomic emission lines*
- *Narrow 10 nm bandwidth*
- *Excellent blocking outside of bandpass*
- *Measured transmission curve supplied*



These narrow band interference filters are available for the most frequently used mercury discharge lines to provide high-energy transmission and elimination of the continuum.

There are also filters that isolate atomic emission lines from plasms, flames or other line lamps. The narrow band, sharp cutoffs and excellent blocking are responsible for the good line to background ratios. These high-rejection type filters also provide excellent isolation from other mercury lines.

Incident power

No general specification can be given because of the disparate sources used with these filters. Temperature changes in excess of 5 degree C per minute, whether environment or absorbed radiation induced, can cause cracking or delamination of the filters. Most filters have a highly reflective (mirror-like) side and a darker absorptive or colored side. Always place the highly reflective side towards a high intensity source. This way the large majority of the unwanted radiation is reflected rather than absorbed and converted to heat in the filter itself. Check that the reflected radiation does not damage the source. With high-power broadband incident radiation of (≥300 W) arc or halogen sources it may be necessary to use a liquid filter in front of the optical components to absorb excess infrared radiation.

General specifications		
Diameter tolerance	+0/-0.25 mm	
Usable aperture	Size	Aperture
	25.0 mm Ø	21.0 mm Ø
	50.0 mm Ø	45.0 mm Ø
Surface quality	80 - 50 (Per MIL-PRF-13830B)	
Optical quality	Commercial instrumentation grade	
Out-of-band blocking	1 x 10^{-4} from X-ray to FIR	
Specification temp.	+23° C	
Max. survival temperature range	CW/L 214 - 380 nm	-50° C to +50° C
	CW/L 380.1 - 2400 nm	-50° C to +70° C
Humidity resistance	Per MIL-C-48497A	
Mechanical	Mounted in an anodized aluminum ring	

Ordering information

Mercury line filters				
CWL [nm]	**Min. peak transmission [%]**	**N***	**Part number 25 mm diam.**	**Part number 50 mm diam.**
253.7	12	-	254FS10-25	254FS10-50
312.6	15	-	313FS10-25	313FS10-50
334.1	25	1.45	334FS10-25	334FS10-50
365.0	25	1.45	365FS10-25	365FS10-50
404.7	45	1.45	405FS10-25	405FS10-50
435.8	45	1.45	436FS10-25	436FS10-25
546.1	55	2.05	546FS10-25	546FS10-50
577.0	55	2.05	577FS10-25	577FS10-50
690.7	55	2.05	690FS10-25	690FS10-50
1014.0	45	2.05	014FS10-25	014FS10-50

Analytical line filters					
Element	**CWL [nm]**	**Min. peak transmission [%]**	**N***	**Part number 25 mm diam.**	**Part number 50 mm diam.**
Zn	280.0	12	-	280FS10-25	280FS10-50
H	486.1	50	2.05	486FS10-25	486FS10-50
Cd	508.5	55	2.05	508FS10-25	508FS10-50
Ti	535.0	55	2.05	535FS10-25	535FS10-50
Na	590.0	55	2.05	590FS10-25	590FS10-50
Zn	636.2	60	2.05	636FS10-25	636FS10-50
H	656.3	55	2.05	656FS10-25	656FS10-50

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