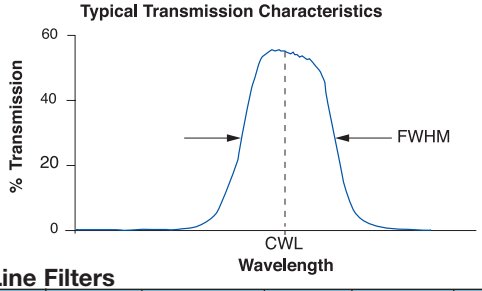
Laser Line Filters

These bandpass (BP) filters provide one of the simplest and most economical ways to transmit a well-defined wavelength band of light, while rejecting other unwanted radiation. Their design is essentially that of a thin film Fabry-Perot Interferometer formed by vacuum deposition techniques and consists of two reflecting stacks, separated by an even-order spacer layer.

These reflecting stacks are constructed from alternating layers of high and low refractive index materials, which can have a reflectance in excess of 99.99%. By varying the thickness of the spacer layer and/or the number of reflecting layers, the central wavelength and bandwidth of the filter can be altered. This type of filter displays very high transmission in the bandpass region, but the spectral range of blocked light on either side of the bandpass region is narrow. To compensate for this deficiency, an additional blocking component is added, which is either an all dielectric or a metal-dielectric depending on the requirements of the filter. Although this additional blocking component will eliminate any unwanted out-of-band radiation, it also reduces the filter's overall transmission throughput.

Using these methods, Thorlabs is capable of offering a wide range of BP filters from 340nm - 1650nm. In addition, custom BP filters can be fabricated; please contact our technical support staff to discuss your particular requirements.



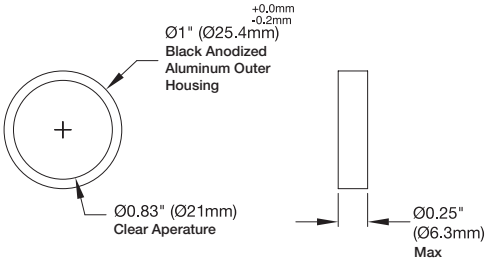
Laser Line Filters

ITEM#	LASER LINE	CWL[1] (nm)	FWHM[2] (nm)	T[3] MIN (%)	BLOCKING: ≥OD 4 MIN.	PRICE CODE
FL350-10	XeF	350 ± 2	10 ± 2	25	200-1150nm	C
FL355-10	Nd:YAG	355 ± 2	10 ± 2	25	200-1150nm	C
FL441.6-10	HeCd	441.6 ± 2	10 ± 2	60	200-1150nm	C
FL457.9-10	Argon	457.9 ± 2	10 ± 2	65	200-1150nm	C
FL460-10	Argon	460 ± 0.2	10 ± 2	65	200-1150nm	C
FL488-1	Argon	488 ± 0.2	1 ± 0.2	40	200-1150nm	G
FL488-3	Argon	488 ± 0.6	3 ± 0.6	45	200-1150nm	F
FL488-10	Argon	488 ± 2	10 ± 2	65	200-1150nm	C
FL508.5-10	Argon	508.5 ± 2	10 ± 2	65	200-1150nm	C
FL514.5-1	Argon	514.5 ± 0.2	1 ± 0.2	45	200-1150nm	G
FL514.5-3	Argon	514.5 ± 0.6	3 ± 0.6	55	200-1150nm	F
FL514.5-10	Argon	514.5 ± 2	10 ± 2	65	200-1150nm	C
FL532.-1	Argon	532. ± 0.2	1 ± 0.2	40	200-1150nm	G
FL532-3	Argon	532 ± 0.6	3 ± 0.6	60	200-1150nm	F
FL532-10	Nd:YAG	532 ± 2	10 ± 2	70	200-1150nm	C
FL543.5-10	HeNe	543.5 ± 2	10 ± 2	70	200-1150nm	C
FL632.8-1	HeNe	632.8 ± 0.2	1 ± 0.2	50	200-1150nm	G
FL632.8-3	HeNe	632.8 ± 0.6	3 ± 0.6	65	200-1150nm	F
FL632.8-10	HeNe	632.8 ± 2	10 ± 2	70	200-1150nm	C
FL635-10	Diode	635 ± 2	10 ± 2	70	200-1150nm	C
FL647.1-10	Krypton	647.1 ± 2	10 ± 2	70	200-1150nm	C
FL670-10	Diode	670 ± 2	10 ± 2	70	200-1150nm	C
FL694.3-10	Ruby	694.3 ± 2	10 ± 2	70	200-1150nm	C
FL730-10	Diode	730 ± 2	10 ± 2	70	200-1150nm	C
FL780-10	Diode	780 ± 2	10 ± 2	70	200-1150nm	C
FL830-10	Diode	830 ± 2	10 ± 2	70	200-1150nm	C
FL850-10	Diode	850 ± 2	10 ± 2	70	200-1150nm	C
FL880-10	Diode	880 ± 2	10 ± 2	70	200-1150nm	C
FL880-40	Diode	880 ± 8	40 ± 8	70	200-1150nm	C
FL880-70	Diode	880 ± 10	70 ± 8	70	200-1150nm	C
FL905-10	Diode	905 ± 2	10 ± 2	70	200-1150nm	C
FL905-25	Diode	905 ± 5	25 ± 5	70	200-1150nm	C
FL1064-3	Nd:YAG	1064 ± 0.6	3 ± 0.6	55	200-1150nm	G
FL1064-10	Nd:YAG	1064 ± 2	10 ± 2	70	200-1150nm	C
FL1152-10	HeNe	1152 ± 2	10 ± 2	45	200-3000nm	C
FL1300-30	Diode	1300 ± 6	30 ± 6	45	200-3000nm	C
FL1550-12	Diode	1550 ± 2.5	12 ± 2.3	40	200-1850nm	C
FL1550-30	Diode	1550 ± 6	30 ± 6	45	200-1850nm	C
FL1550-40	Diode	1550 ± 8	40 ± 8	45	200-1850nm	C

1) Central Wavelength 2) Full Width at Half Maximum 3) Transmission

Specifications

- **Minimum Clear Aperture:** Ø21mm (1" OD, See Drawing)
- **Thickness:** <6.3mm
- **Optimum Operating Temperature:** 23°C
- **Edge Treatment:** Mounted in Black Anodized Aluminum Ring
- **Edge Markings:** CWL-FWHM ↑ Lot Number (The Arrow Points in the Direction of the Light Transmission)
- **Surface/Coating Quality:** 80-50 Scratch-Dig Per MIL-0-13830A
- **Operating Temperature:** -50°C to +80°C
- **Substrates:** Schott Borofloat and Soda Lime



PRICE CODE	$	£	€	RMB
A	$ 82.20	£ 51.80	€ 76,40	¥ 785.00
B	$ 84.20	£ 53.00	€ 78,30	¥ 804.10
C	$ 88.60	£ 55.80	€ 82,40	¥ 846.10
D	$ 95.70	£ 60.30	€ 89,00	¥ 913.90
E	$ 126.90	£ 79.90	€ 118,00	¥ 1,211.90
F	$ 129.80	£ 81.80	€ 120,70	¥ 1,239.60
G	$ 198.80	£ 125.20	€ 184,90	¥ 1,898.50