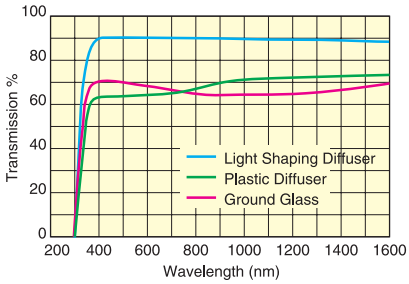
## Ordering Information

| Type | Diffusion Angle (FWHM) | Model 25 mm Diameter | Model 50 mm Diameter |
|---|---|---|---|
| Circular Kit, Narrow | 0.5°, 1°, 5°, 10° | 10DKIT-C1 | 20DKIT-C1 |
| Circular Kit, Medium | 10°, 15°, 20°, 25° | 10DKIT-C2 | 20DKIT-C2 |
| Circular Kit, Wide | 30°, 40°, 60°, 80° | 10DKIT-C3 | 20DKIT-C3 |
| Elliptical Kit, Narrow | 0.2° x 10°, 0.2° x 40°, 2° x 10°, 10° x 20° | 10DKIT-E1 | 20DKIT-E1 |
| Elliptical Kit, Medium | 2° x 60°, 5° x 30°, 10° x 60°, 20° x 80° | 10DKIT-E2 | 20DKIT-E2 |
| Elliptical Kit, Wide | 25° x 95°, 35° x 70°, 35° x 95°, 40° x 80° | 10DKIT-E3 | 20DKIT-E3 |




## Selection Guide

**Narrow diffusers** maintain source collimation for use with lenses; popular for LED or LD homogenization.

**Medium diffusers** are used for general applications.

**Wide diffusers** are used for source arrays, ring lights, backlights, and rear display screens.

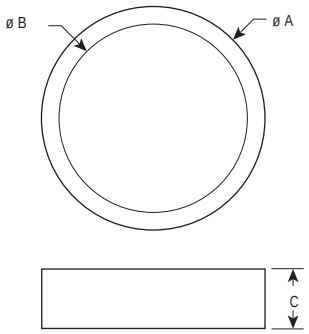
# Laser Line Filters

- Out-of-band blocking to less than 0.01% ($10^{-4}$)
- Excellent temperature stability
- Center wavelengths at common laser lines
- 12.7 and 25.4 mm diameters

Laser Line Filters are ideal for transmitting laser light while suppressing ambient light. The center wavelength shifts linearly with temperature less than 0.02 nm/°C. The highly reflective side of the filter should generally face the source, minimizing the thermal load on the blocking glass and epoxies.

## Specifications

| | |
|---|---|
| Clear Aperture | 8.7 mm diameter for 12.7 mm diameter filters<br>21.4 mm diameter for 25.4 mm diameter filters |
| Surface Quality | 80-50 scratch-dig |
| Diameter Tolerance | +0/-0.1 mm |
| Thickness | ≤7.62 mm |
| Out-of-Band Blocking | T<0.01% ($10^{-4}$) for $\lambda > 1.2\ \lambda_0$ and $\lambda < 0.8\ \lambda_0$ |
| Wavelength Shift with Temperature | <0.02 nm/°C |
| Specification Temperature | +23°C |
| Temperature Range | -50 °C to +80 °C |
| Humidity Resistance | Per MIL-STD-810C, method 507, procedure 1, modified for 5 cycles |
| Cleaning | Non-abrasive method, acetone or isopropyl alcohol on lens tissue recommended (see page 622) |
| Damage Threshold | 1 W/cm² CW, 0.5 J/cm² pulsed, typical |



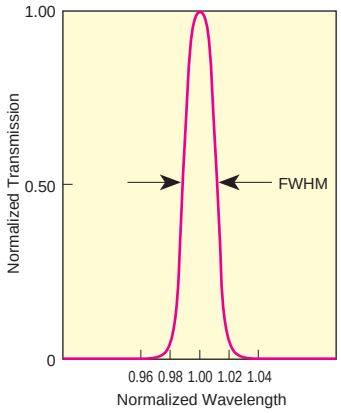

Dimension (mm)

| Model | øA | øB | C |
|---|---|---|---|
| 05LF | 12.7 | 8.7 | 6.25 to 7.62 |
| 10LF | 25.4 | 21.4 | 6.25 to 7.62 |

# Ordering Information

Availability – Guaranteed on select items @ newport.com

| Laser Type | Center Wavelength (nm) | FWHM (nm) | Minimum Peak Transmission (%) | Blocking | Effective Index of Refraction $n_e$ | Model Diameter 12.7 mm | Model Diameter 25.4 mm |
|---|---|---|---|---|---|---|---|
| Excimer, ArF | 193 ±2 | 20 ±2 | 10 | Xray–Far IR | 1.40 | | 10LF20-193 |
| Excimer, KrF | 248 ±2 | 10 ±2 | 15 | Xray–Far IR | 1.40 | | 10LF10-248 |
| Nd:YAG (4) | 266 ±2 | 10 ±2 | 15 | Xray–Far IR | 1.40 | | 10LF10-266 |
| Excimer, XeCl | 308 ±2 | 10 ±2 | 15 | Xray–Far IR | 1.40 | | 10LF10-308 |
| HeCd | 325 ±2 | 10 ±2 | 30 | 100–2000 nm | 1.40 | | 10LF10-325 |
| Excimer, XeF | 351 ±2 | 10 ±2 | 40 | 100–2000 nm | 1.40 | | 10LF10-351 |
| Nd:YAG (3) | 355 ±2 | 10 ±2 | 40 | 100–2000 nm | 1.40 | | 10LF10-355 |
| | 440 ±2 | 10 ±2 | 45 | Xray–Far IR | 1.45 | | 10LF10-440 |
| HeCd | 441.6 ±2 | 10 ±2 | 45 | Xray–Far IR | 1.45 | | 10LF10-442 |
| | 460 ±2 | 10 ±2 | 50 | Xray-Far IR | 1.45 | | 10LF10-460 |
| Argon-Ion | 488 ±0.2 | 1 ±0.2 | 30 | Xray–Far IR | 2.00 | | 10LF01-488 |
| Argon-Ion | 488 ±2 | 10 ±2 | 50 | Xray–Far IR | 2.00 | 05LF10-488 | 10LF10-488 |
| Argon-Ion | 514.5 ±0.2 | 1 ±0.2 | 30 | Xray–Far IR | 2.00 | | 10LF01-515 |
| Argon-Ion | 514.5 ±2 | 10 ±2 | 50 | Xray–Far IR | 2.00 | 05LF10-515 | 10LF10-515 |
| Nd:YAG (2) | 532 ±2 | 10 ±2 | 50 | Xray–Far IR | 2.00 | 05LF10-532 | 10LF10-532 |
| HeNe | 632.8 ±0.2 | 1 ±0.2 | 30 | Xray–Far IR | 2.00 | | 10LF01-633 |
| HeNe | 632.8 ±0.5 | 3 ±0.5 | 45 | Xray–Far IR | 2.00 | | 10LF03-633 |
| HeNe | 632.8 ±2 | 10 ±2 | 50 | Xray–Far IR | 2.00 | 05LF10-633 | 10LF10-633 |
| Diode | 635 ±2 | 10 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-635 |
| Diode | 670 ±2 | 11 ±2 | 50 | Xray–Far IR | 2.00 | 05LF10-670 | 10LF10-670 |
| Diode | 670 ±3 | 20 ±3 | 50 | Xray–Far IR | 2.00 | | 10LF20-670 |
| Ruby | 694.3 ±2 | 11 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-694 |
| Diode | 730 ±2 | 12 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-730 |
| Diode | 780 ±2 | 11 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-780 |
| Diode | 780 ±3 | 20 ±3 | 50 | Xray–Far IR | 2.00 | | 10LF20-780 |
| Diode | 830 ±2 | 12 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-830 |
| Diode | 830 ±3 | 20 ±3 | 50 | Xray–Far IR | 2.00 | | 10LF20-830 |
| Diode | 850 ±2 | 13 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-850 |
| Diode | 850 ±3 | 20 ±3 | 50 | Xray–Far IR | 2.00 | | 10LF20-850 |
| Diode | 880 ±2 | 14 ±2 | 50 | Xray–Far IR | 2.00 | | 10LF10-880 |
| Diode | 905 ±2 | 10 ±2 | 65 | Xray–1200 nm | 2.00 | | 10LF10-905 |
| Diode | 905 ±3.5 | 25 ±3.5 | 75 | Xray–1200 nm | 2.00 | | 10LF25-905 |
| Nd:YAG | 1064 ±0.5 | 4 ±0.5 | 50 | Xray–1200 nm | 2.00 | | 10LF04-1064 |
| Nd:YAG | 1064 ±2 | 10 ±2 | 65 | Xray–1200 nm | 2.00 | | 10LF10-1064 |
| Nd:YAG | 1064 ±3.5 | 25 ±3.5 | 75 | Xray–1200 nm | 2.00 | | 10LF25-1064 |
| Diode | 1300 ±7 | 30 ±7 | 50 | Xray–Far IR | 2.00 | | 10LF30-1300 |
| Diode | 1550 ±7 | 30 ±7 | 50 | Xray–Far IR | 2.00 | | 10LF30-1550 |




*FH-1R Filter Holder page 688*

*FH-1S Filter Holder page 688*