

THz Low Pass Filters

THz Low Pass Filters are meant to transmit THz radiation and block short wavelengths. The filter is a set of materials mounted in a holder with fit ring. Operation principle of the filters is based on the redistribution of the radiation by means of dispersion, reflection, scattering, diffusion, diffraction, and interference.

Applications:

- THz spectroscopy;
- Imaging;
- THz testing devices;
- Astronomy, space based astronomy, and astrophysics;
- Materials research;
- Sensors and detectors;
- Electro-optic research.

Features:

- Used in wavelength range from IR to MM;
- High transmittance in pass band;
- Low transmittance (<0.1%) in stop band;
- Mounted in holders.



| Part Number | Cutting wavelength, λ_c , μm | Max transmittance of pass band, % | Damage threshold, W/cm^2 , CW |
|--|---|-----------------------------------|---|
| LPF23.4-24 LPF23.4-35 LPF23.4-47 | 13 | 92 | 7 |
| LPF23.3-24 LPF23.3-35 LPF23.3-47 | 13 | 94 | 7 |
| LPF23.1-24 LPF23.1-35 LPF23.1-47 | 13 | 91 | 7 |
| LPF14.3-24 LPF14.3-35 LPF14.3-47 | 21 | 95 | 7 |
| LPF10.9-24 LPF10.9-35 LPF10.9-47 | 27.5 | 73 | 8 |
| LPF8.8-24 LPF8.8-35 LPF8.8-47 | 34 | 80 | 8 |
| LPF5.5-24 LPF5.5-35 LPF5.5-47 | 55 | 83 | 8 |
| LPF4.3-24 LPF4.3-35 LPF4.3-47 | 70 | 82 | 8 |
| LPF4.0-24 LPF4.0-35 LPF4.0-47 | 75 | 82 | 8 |
| LPF3.2-24 LPF3.2-35 LPF3.2-47 | 94 | 81 | 8 |

Part Number Designation for Tydex Low Pass Filters: LPF <frequency, THz>-<aperture, mm>

Sizes and Shapes

Round filters with clear aperture/outer diameter 24/31, 35/44, and 47/60 mm are available from stock. Alternate sizes and custom designs are available upon request. For price quotation and delivery please fax or e-mail us.

Spectral curves

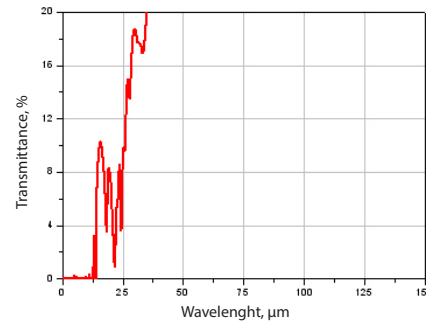
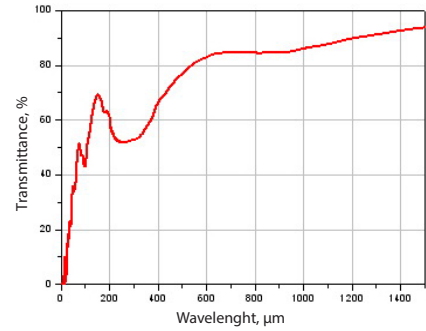


Fig.1, 2 Transmission of LPF23.4

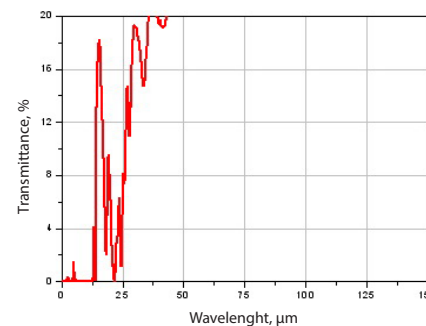
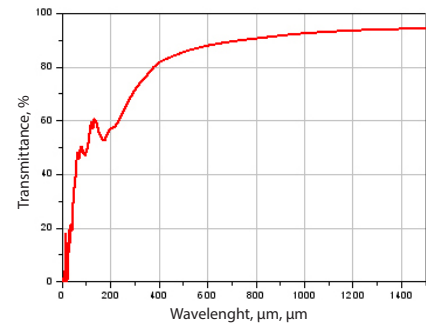


Fig.3, 4 Transmission of LPF23.3



THz Low Pass Filters

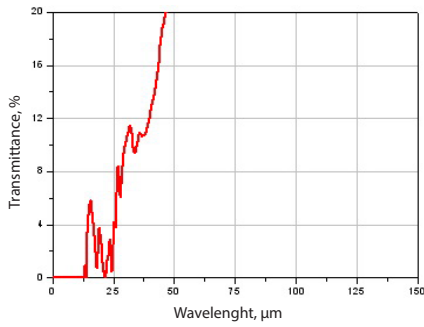
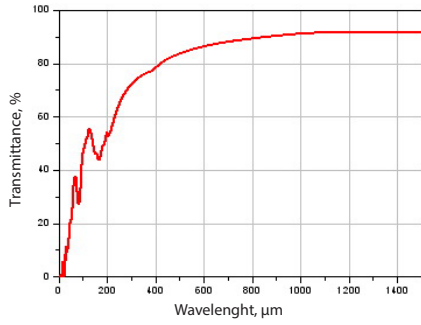


Fig.5,6 Transmission of LPF23.1

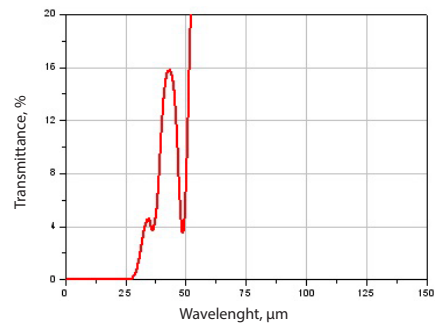
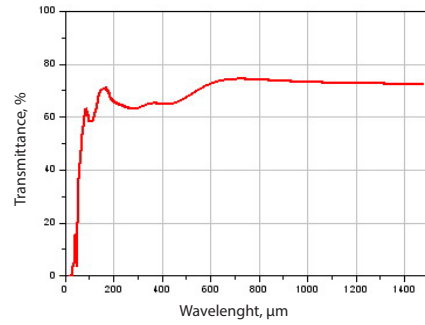


Fig.9, 10 Transmission of LPF10.9

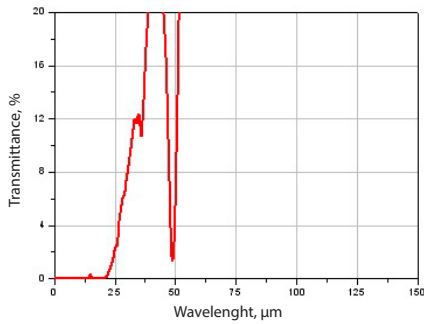
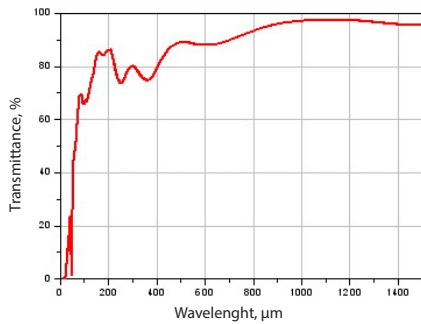


Fig.7,8 Transmission of LPF14.3

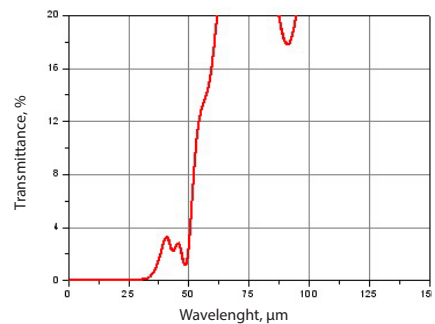
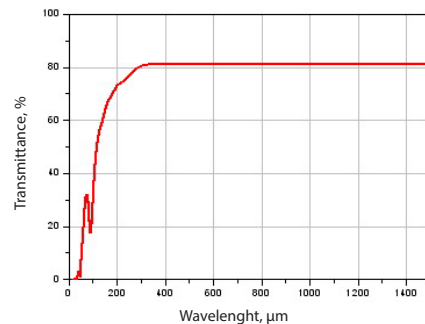


Fig.11, 12 Transmission of LPF8.8



THz Low Pass Filters

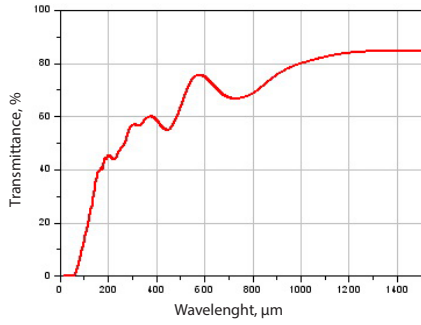


Fig. 13, 14 Transmission of LPF5.5

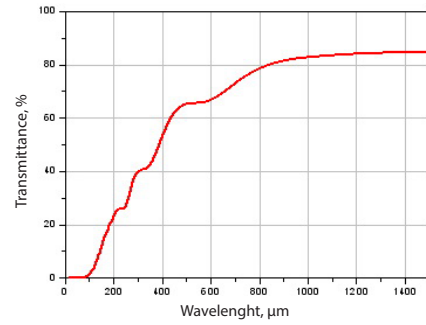
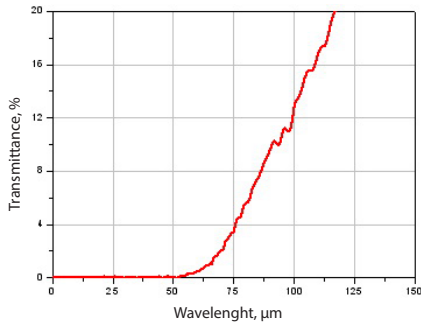


Fig. 17, 18 Transmission of LPF4.0

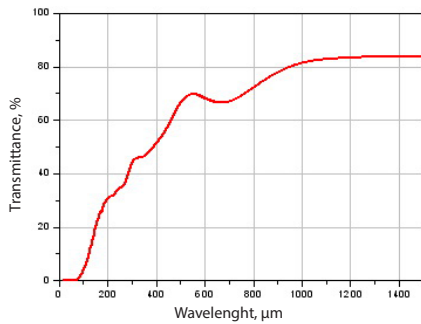
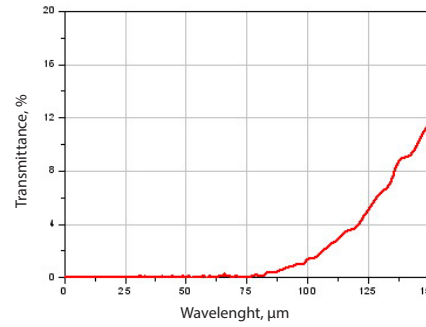


Fig. 15, 16 Transmission of LPF4.3

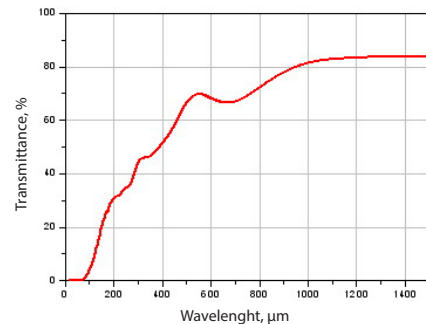
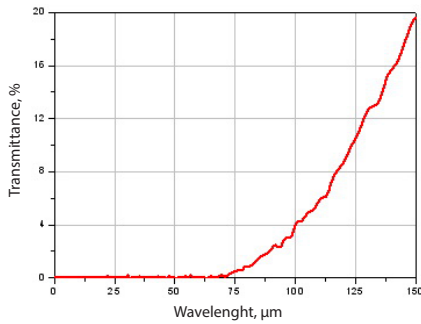


Fig. 19, 20 Transmission of LPF3.2

