# 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 dispertion, 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, λc, μm | Max transmittance of pass band, % | Damage threshold, W/cm², CW |
|---|---|---|---|
| LPF23.4-24<br>LPF23.4-35<br>LPF23.4-47 | 13 | 92 | 7 |
| LPF23.3-24<br>LPF23.3-35<br>LPF23.3-47 | 13 | 94 | 7 |
| LPF23.1-24<br>LPF23.1-35<br>LPF23.1-47 | 13 | 91 | 7 |
| LPF14.3-24<br>LPF14.3-35<br>LPF14.3-47 | 21 | 95 | 7 |
| LPF10.9-24<br>LPF10.9-35<br>LPF10.9-47 | 27.5 | 73 | 8 |
| LPF8.8-24<br>LPF8.8-35<br>LPF8.8-47 | 34 | 80 | 8 |
| LPF5.5-24<br>LPF5.5-35<br>LPF5.5-47 | 55 | 83 | 8 |
| LPF4.3-24<br>LPF4.3-35<br>LPF4.3-47 | 70 | 82 | 8 |
| LPF4.0-24<br>LPF4.0-35<br>LPF4.0-47 | 75 | 82 | 8 |
| LPF3.2-24<br>LPF3.2-35<br>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**

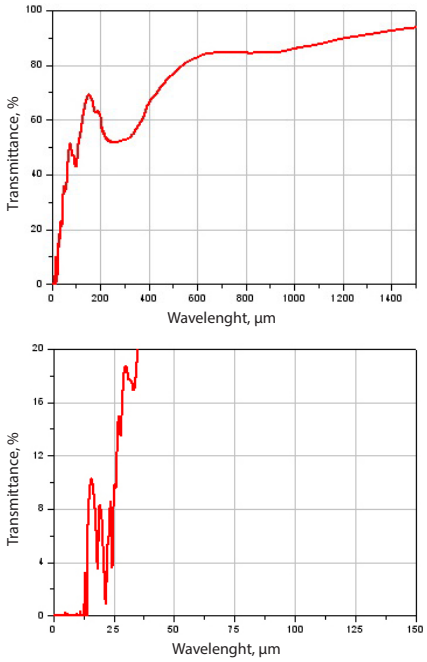



*Fig.1, 2 Transmission of LPF23.4*

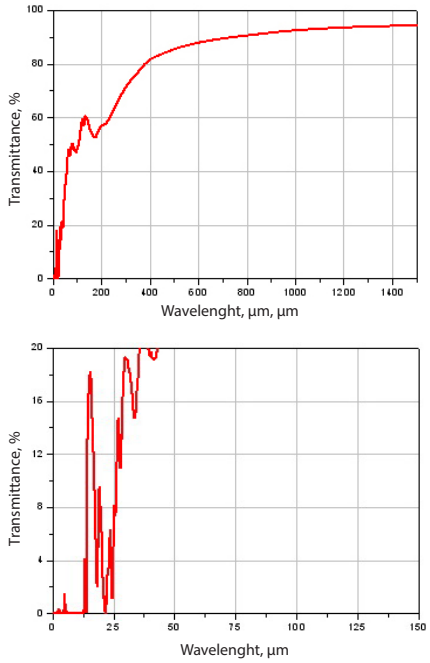
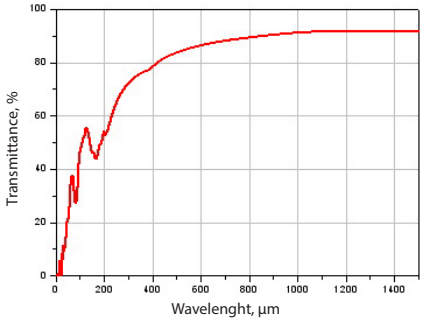



*Fig.3, 4 Transmission of LPF23.3*



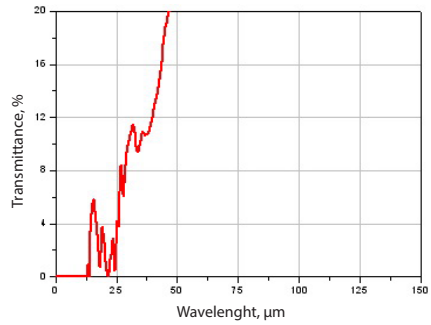
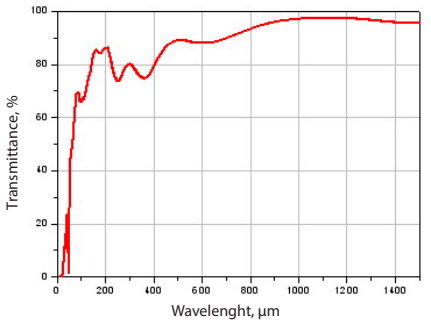




*Fig.5,6 Transmission of LPF23.1*



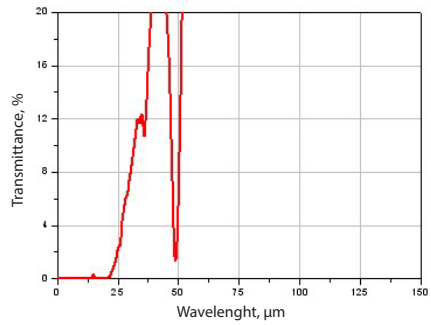
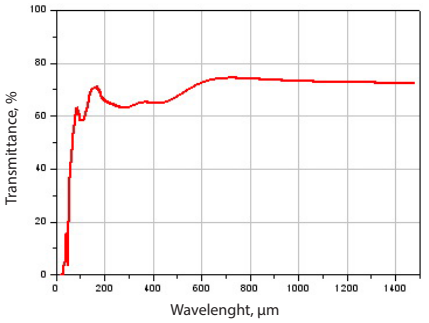




*Fig.7,8 Transmission of LPF14.3*



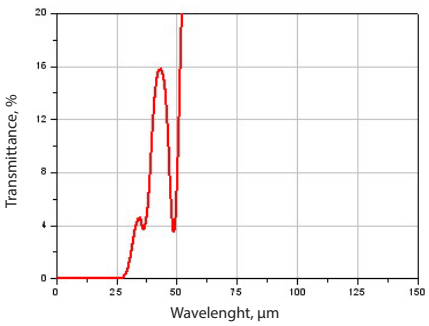
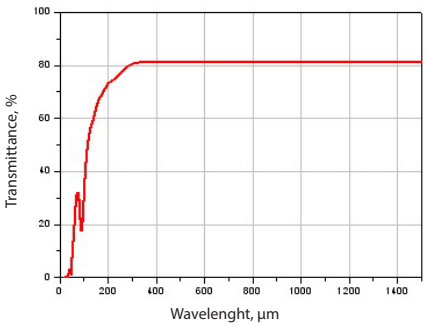




*Fig.9, 10 Transmission of LPF10.9*



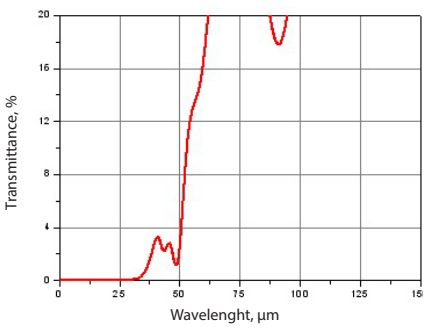




*Fig.11, 12 Transmission of LPF8.8*

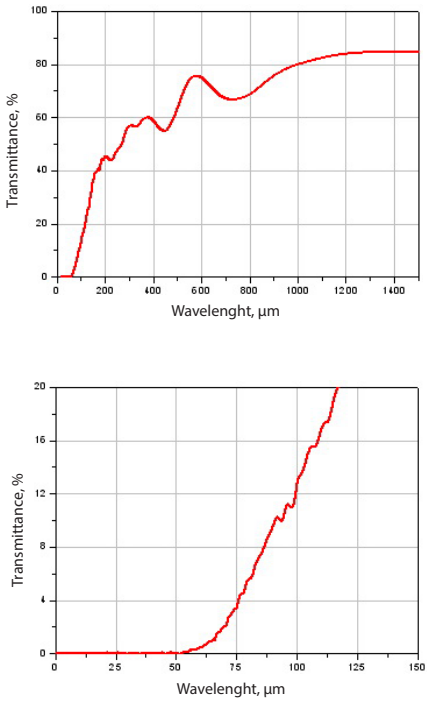



*Fig.13, 14 Transmission of LPF5.5*

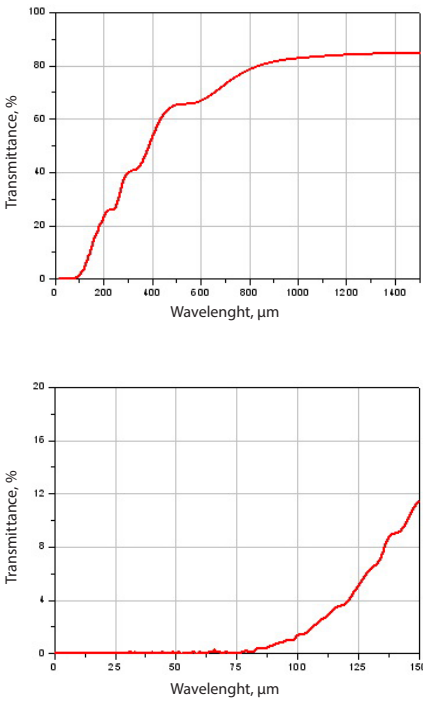



*Fig.17, 18 Transmission of LPF4.0*

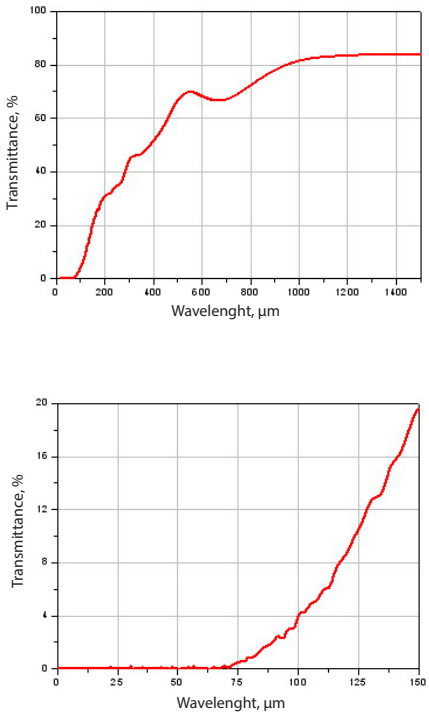



*Fig.15, 16 Transmission of LPF4.3*

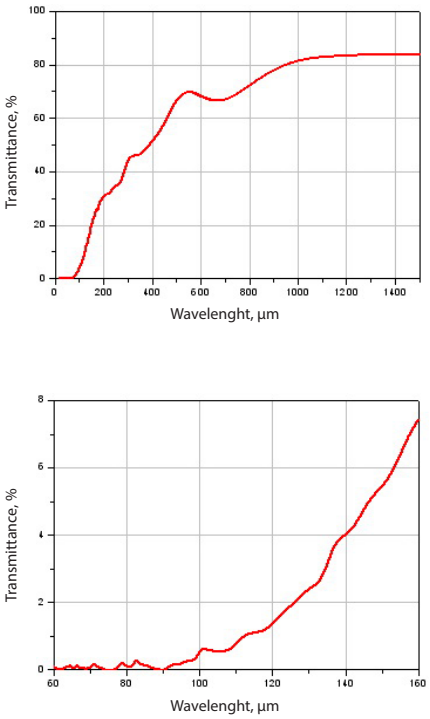



*Fig.19, 20 Transmission of LPF3.2*