

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 Designation for Tydex Low Pass Filters:

LPF <frequency, THz>-<aperture, mm>

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

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

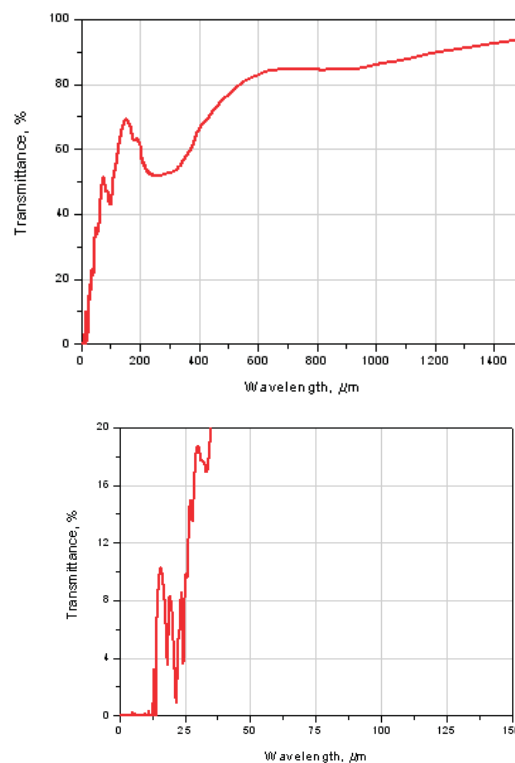


Fig. 1, 2 Transmission of LPF23.4.

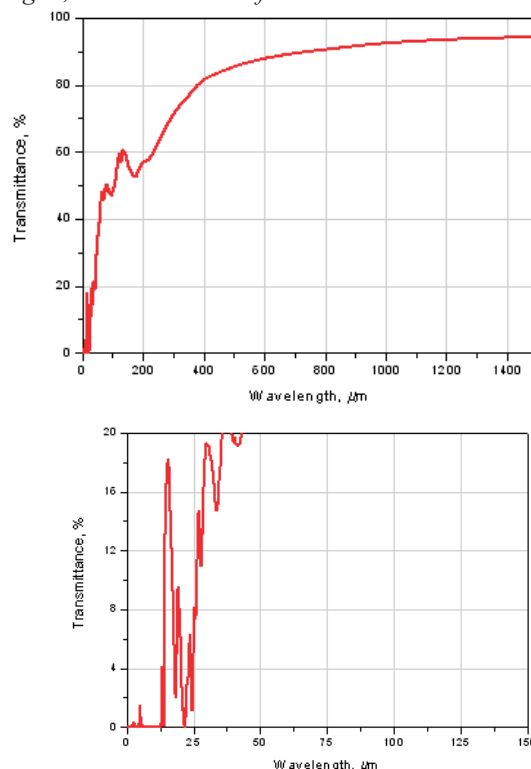


Fig. 3, 4 Transmission of LPF23.3.

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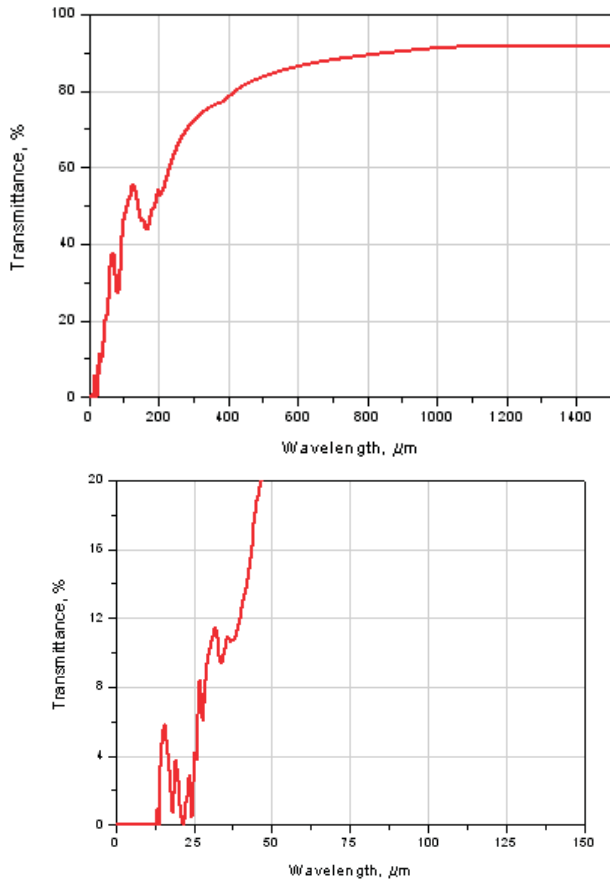


Fig. 5,6 Transmission of LPF23.1.

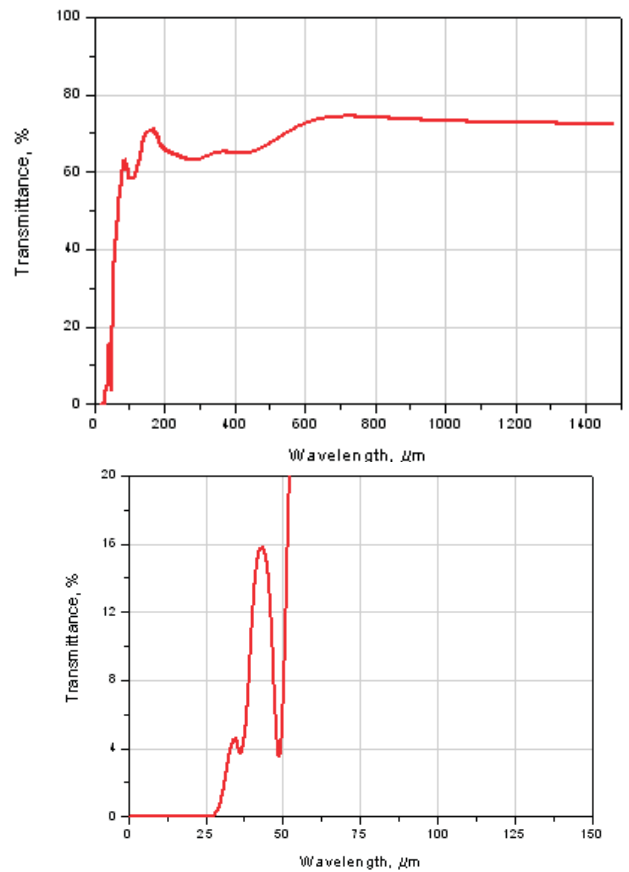


Fig. 9, 10 Transmission of LPF10.9.

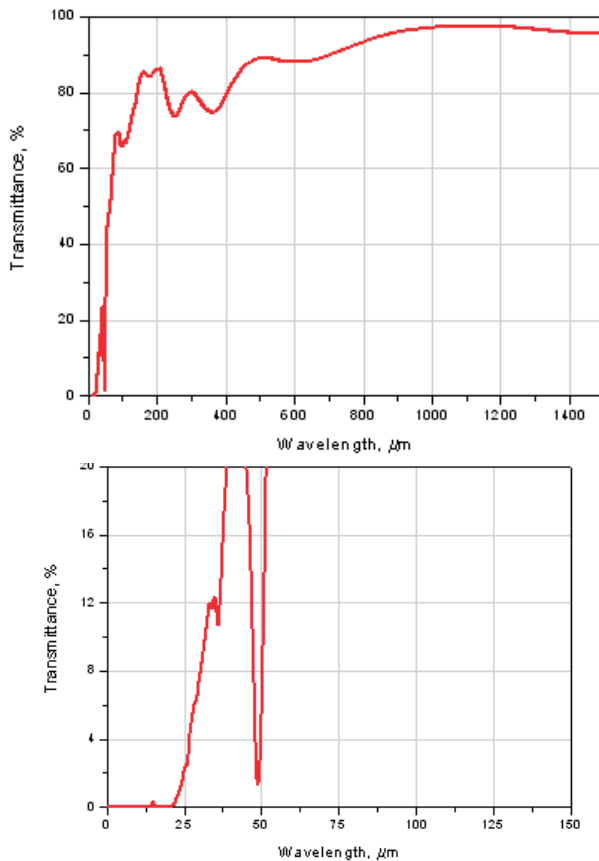


Fig. 7,8 Transmission of LPF14.3.

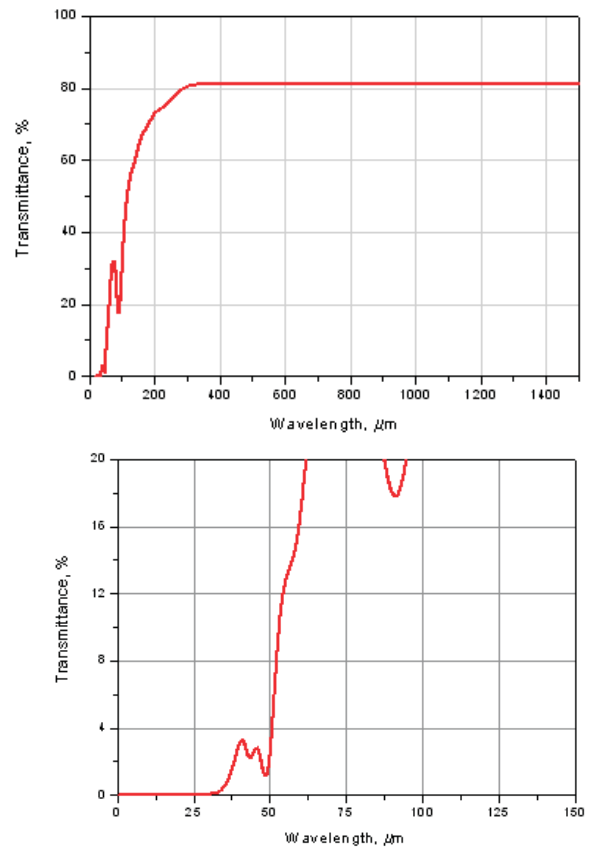


Fig. 11, 12 Transmission of LPF8.8.

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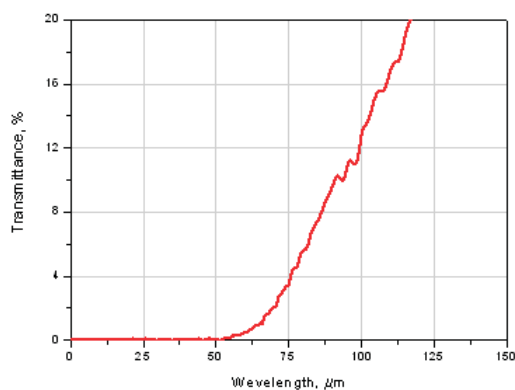
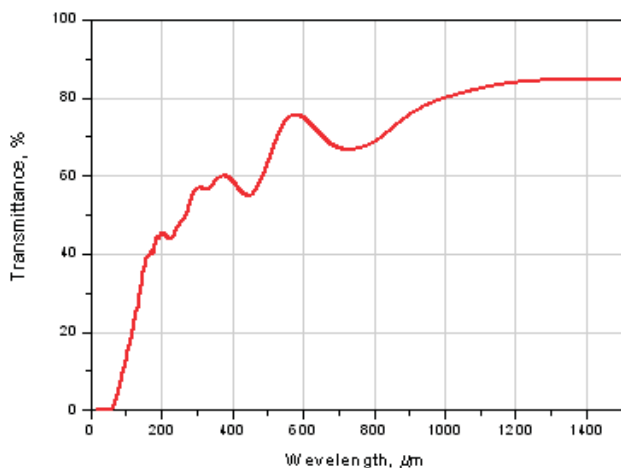


Fig. 13, 14 Transmission of LPF5.5.

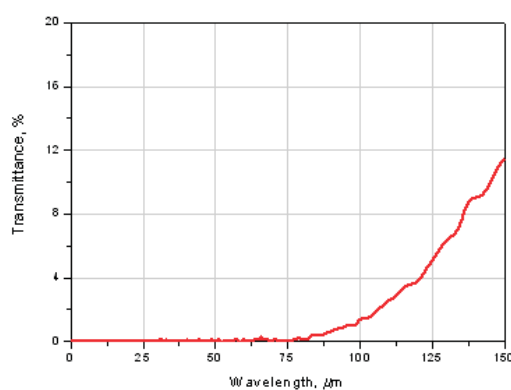
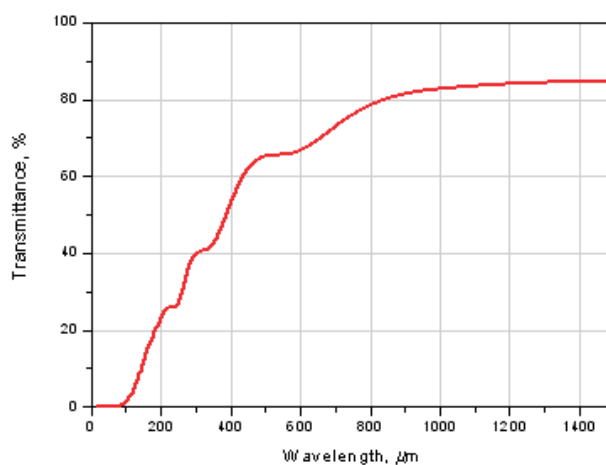


Fig. 17, 18 Transmission of LPF4.0.

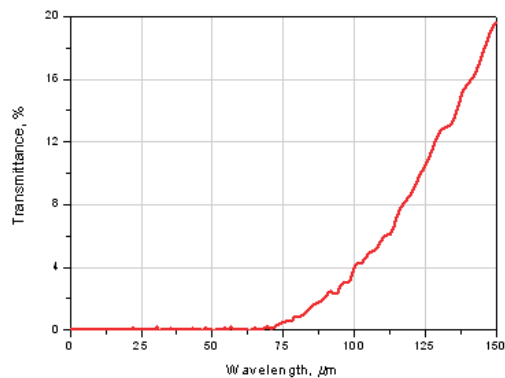
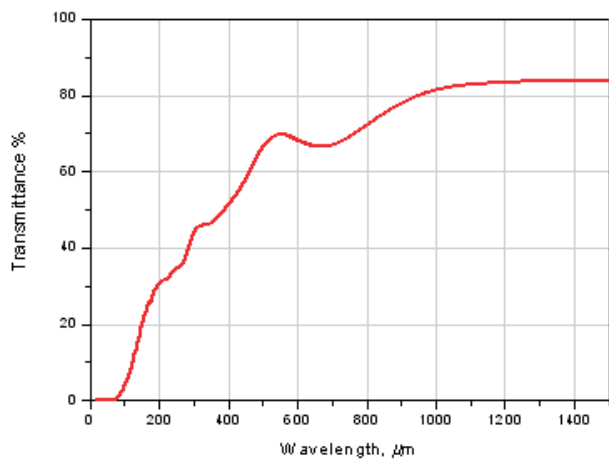


Fig. 15, 16 Transmission of LPF4.3.

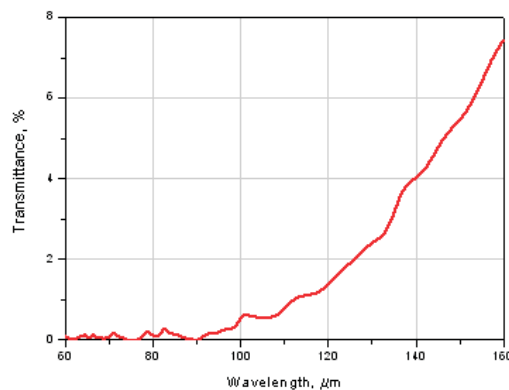
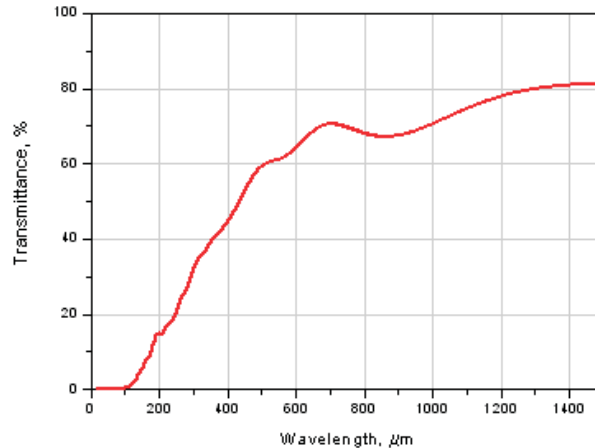


Fig. 19, 20 Transmission of LPF3.2.