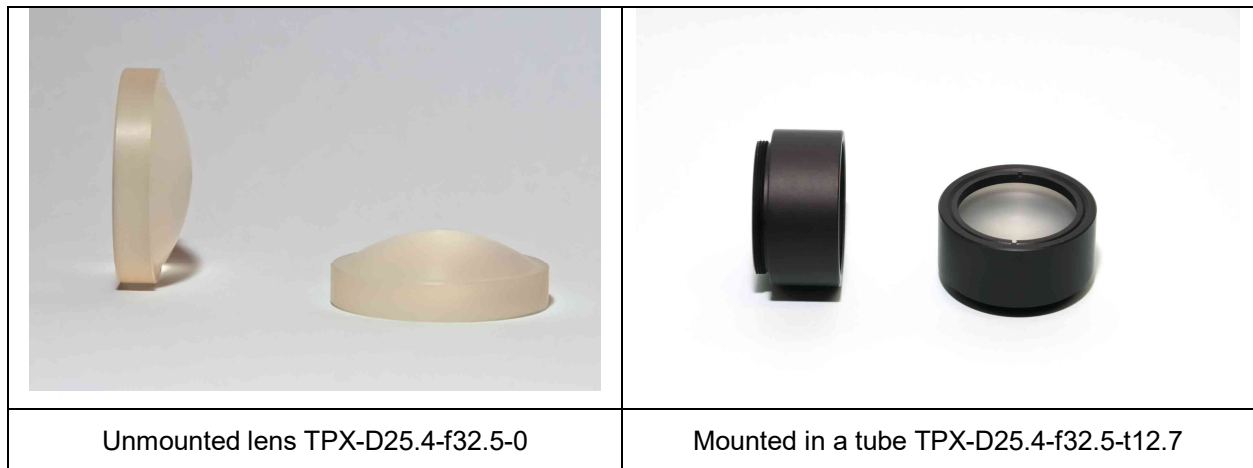


Data sheet TPX-D25.4-f32.5

Plano-convex TPX lens with diameter 25.4 mm and focal length 32.5 mm for THz application



Description

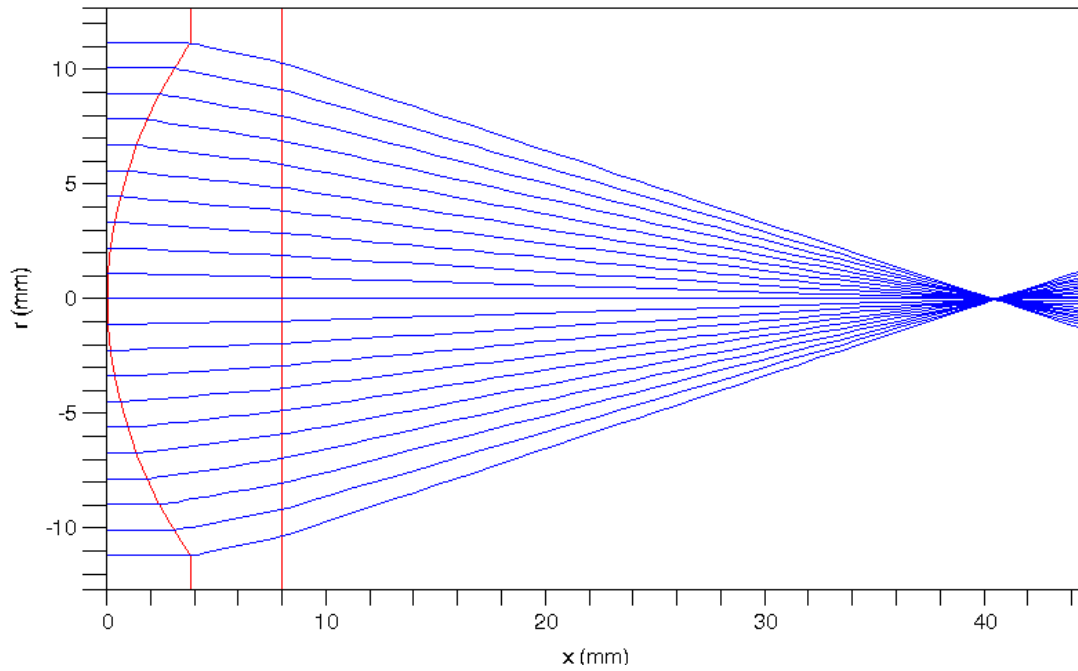
The TPX-D25.4-f32.5 is a plano-convex TPX (Polymethylpentene) lens for THz waves. It can be used to collimate the diverging THz beam coming from a photoconductive antenna with hyperhemispherical silicon lens or to focus a collimated THz beam.



Lens parameters:	material	TPX (Polymethylpentene)
	refractive index n	1.45 @ 1 THz
	absorption coeff. α	0.3 cm^{-1}
	focal length	32.5 mm (distance flat surface – focus)
	outer lens diameter	25.4 mm
	free aperture diameter	22.4 mm
	maximum lens thickness	8.0 mm
	edge lens thickness	4.2 mm
	aperture angle α	17.6°
	numerical aperture NA	0.30

Airy disc diameter	$\nu = 300 \text{ GHz}$	1.9 mm
	$\nu = 1 \text{ THz}$	554 μm
	$\nu = 3 \text{ THz}$	185 μm

Lens tube	outer diameter	30.5 mm
	length	12.7 mm ($\frac{1}{2}$ ") or 25,4 mm (1")

TPX lens 25.4 mm diameter, 32.5 mm focus length

**Order information**

Part number	Description	Photo
TPX-D25.4-f32.5-0	Unmounted TPX lens with diameter $D = 25.4$ mm and focal length $f = 32.5$ mm	
TPX-D25.4-f32.5-t12.7	Mounted TPX lens with diameter $D = 25.4$ mm and focal length $f = 32.5$ mm, tube length 12.7 mm	
TPX-D25.4-f32.5-t25.4	Mounted TPX lens with diameter $D = 25.4$ mm and focal length $f = 32.5$ mm, tube length 25.4 mm	