

Data sheet TPX-D50-f35

Plano-convex (elliptic) TPX lens with diameter 50 mm and focal length 35 mm for THz application



Unmounted lens TPX-D50-f35-0



Mounted lens TPX-D50-f35-t12.7

Description

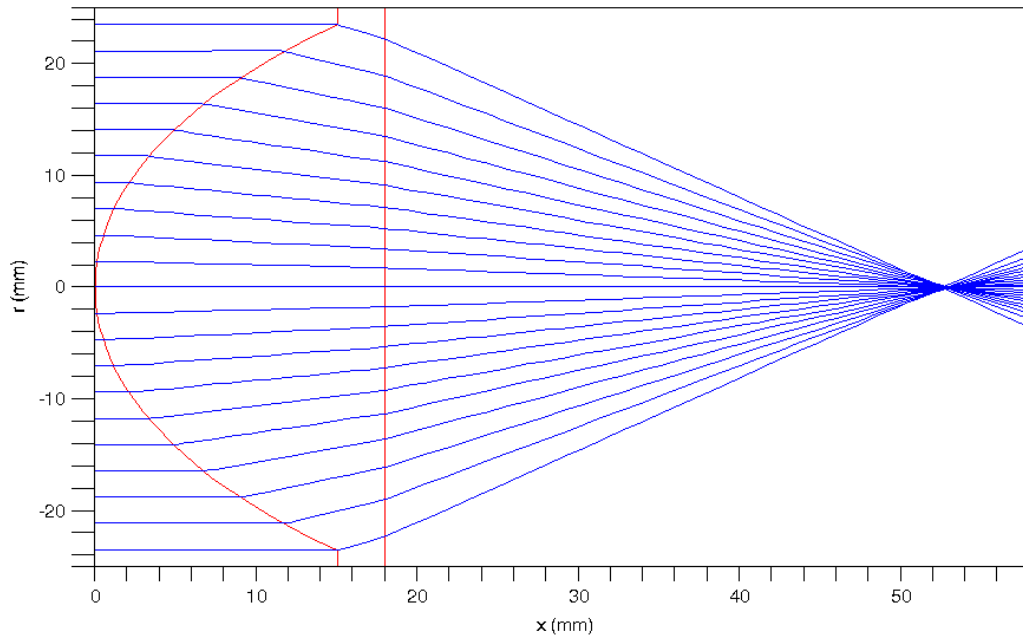
The TPX-D50-f35 is a plano-convex TPX (Polymethylpentene) lens for THz waves. It can be used to focus a collimated THz beam.

Lens parameters:	material	TPX (Polymethylpentene)
	shape	plano-convex (elliptic)
	refractive index n	1.45 @ 1 THz
	absorption coeff. α	0.3 cm ⁻¹
	focal length	35 mm (distance flat surface – focus)
	outer lens diameter	50 mm
	free aperture diameter	47 mm
	maximum lens thickness	18 mm
	edge lens thickness	3 mm
	aperture angle α	32.5 °
	numerical aperture NA	0.54



Airy disc diameter	$\nu = 300$ GHz	950 μm
	$\nu = 1$ THz	284 μm
	$\nu = 3$ THz	95 μm

Lens tube	outer diameter	55.9 mm
	length	12.7 mm ($\frac{1}{2}$ ") or 25,4 mm (1")

TPX lens 50 mm diameter, 35 mm focal length



Order information

Part number	Description	Photo
TPX-D50-f35-0	Unmounted TPX lens with diameter $D = 50$ mm and focal length $f = 35$ mm	
TPX-D50-f35-t12.7	Mounted TPX lens with diameter $D = 50$ mm and focal length $f = 35$ mm, tube length 12.7 mm	
TPX-D50-f35-t25.4	Mounted TPX lens with diameter $D = 50$ mm and focal length $f = 35$ mm, tube length 25.4 mm	