

## Data sheet TPX-D50.8-f250

### Plano-convex TPX lens with diameter 50.8 mm and focal length 250mm for THz application



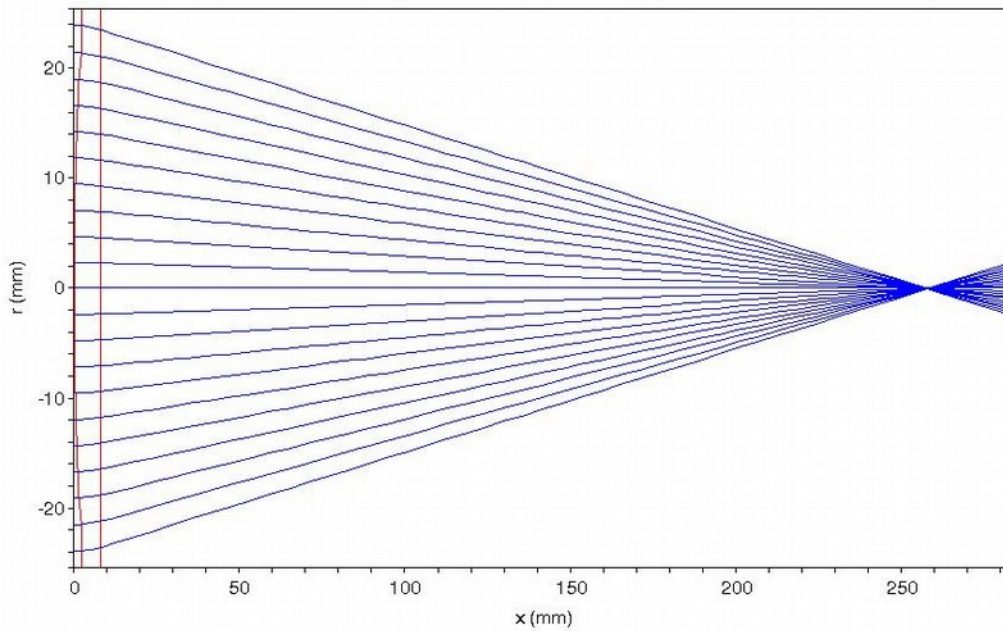
Unmounted lens TPX-D50.8-f250-0

#### Description



The TPX-D50.8-f250 is a plano-convex TPX (Polymethylpentene) lens for THz waves. It can be used to focus a collimated THz beam.

<b>Lens parameters:</b>	material	TPX (Polymethylpentene)
	refractive index $n$	1.45 @ 1 THz
	absorption coeff. $\alpha$	$0.3 \text{ cm}^{-1}$
	focal length	250 mm (distance flat surface – focus)
	outer lens diameter	50.8 mm
	free aperture diameter	47.0 mm
	maximum lens thickness	8 mm
	edge lens thickness	5.5 mm
	aperture angle $\alpha$	$5.4^\circ$
numerical aperture NA	0.09	
<b>Airy disc diameter</b>	$\nu = 300 \text{ GHz}$	6.6 mm
	$\nu = 1 \text{ THz}$	2.0 mm
	$\nu = 3 \text{ THz}$	0.66 mm
<b>Lens tube</b>	outer diameter	55.9 mm
	length	11.4 mm (0.45")

TPX lens 50.8 mm diameter, 250 mm focus length



## Order information

<b>Part number</b>	<b>Description</b>	<b>Photo</b>
TPX-D50.8-f250-0	Unmounted TPX lens with diameter $D = 50.8$ mm and focal length $f = 250$ mm	
TPX-D50.8-f250-t12.7	Mounted TPX lens with diameter $D = 50.8$ mm and focal length $f = 250$ mm, tube length 12.7 mm	
TPX-D50.8-f250-t25.4	Mounted TPX lens with diameter $D = 50.8$ mm and focal length $f = 250$ mm, tube length 25.4 mm	