

## Data sheet TPX-D25.4-f15

### Plano-convex (elliptic) TPX lens with diameter 25.4 mm and focal length 15 mm for THz application



#### Description

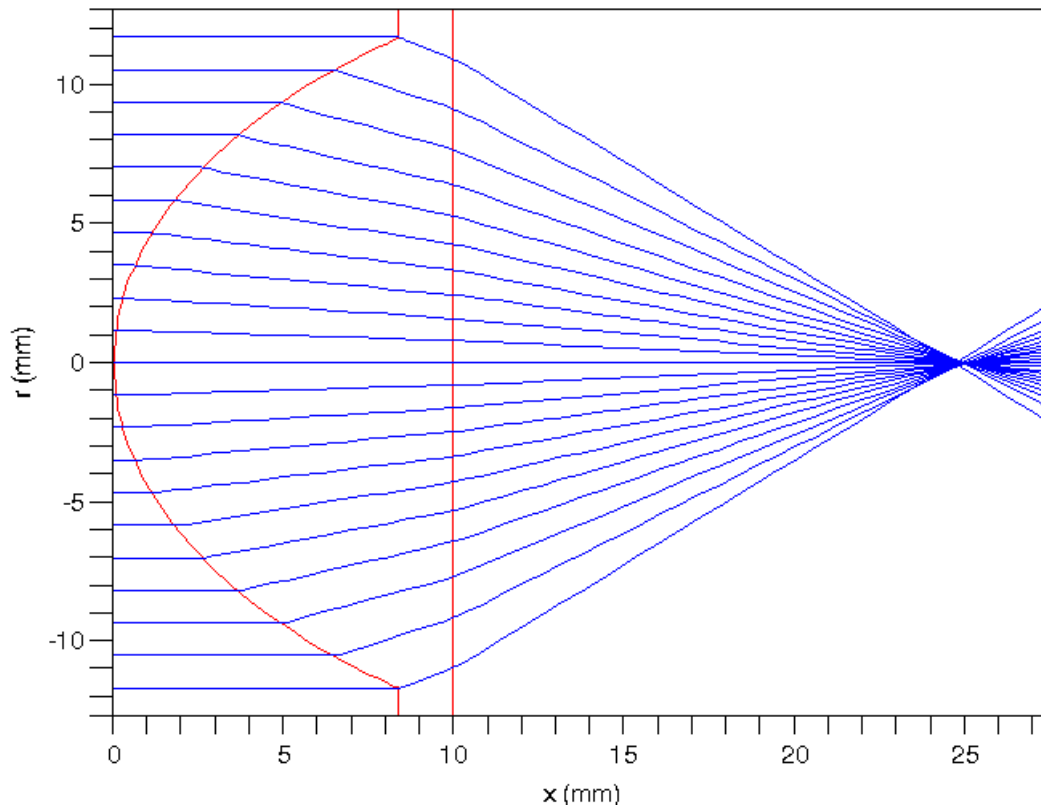
The TPX-D25.4-f15 is a plano-convex TPX (Polymethylpentene) lens for THz waves. It can be used to focus a collimated THz beam.

<b>Lens parameters:</b>	material	TPX (Polymethylpentene)
	shape	plano-convex (elliptic)
	refractive index n	1.45 @ 1 THz
	absorption coeff. $\alpha$	0.3 cm <sup>-1</sup>
	focal length	15 mm (distance flat surface – focus)
	outer lens diameter	25.4 mm
	free aperture diameter	23.4 mm
	maximum lens thickness	8.0 mm
	edge lens thickness	1.6 mm
	aperture angle $\alpha$	26.2 °
	numerical aperture NA	0.59



<b>Airy disc diameter</b>	$\nu = 300$ GHz	816 $\mu\text{m}$
	$\nu = 1$ THz	245 $\mu\text{m}$
	$\nu = 3$ THz	82 $\mu\text{m}$

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

## TPX lens 25.4 mm diameter, 15 mm focal length



## Order information

<b>Part number</b>	<b>Description</b>	<b>Photo</b>
TPX-D25.4-f15-0	Unmounted TPX lens with diameter $D = 25.4$ mm and focal length $f = 15$ mm	
TPX-D25.4-f15-t12.7	Mounted TPX lens with diameter $D = 25.4$ mm and focal length $f = 15$ mm, tube length 12.7 mm	
TPX-D25.4-f15-t25.4	Mounted TPX lens with diameter $D = 25.4$ mm and focal length $f = 15$ mm, tube length 25.4 mm	