

Data sheet TPX-D50.8-f65

Plano-convex TPX lens with diameter 50.8 mm and focal length 65 mm for THz application



Unmounted lens TPX-D50.8-f65-0



Mounted lens TPX-D50.8-f65-t12.7

Description

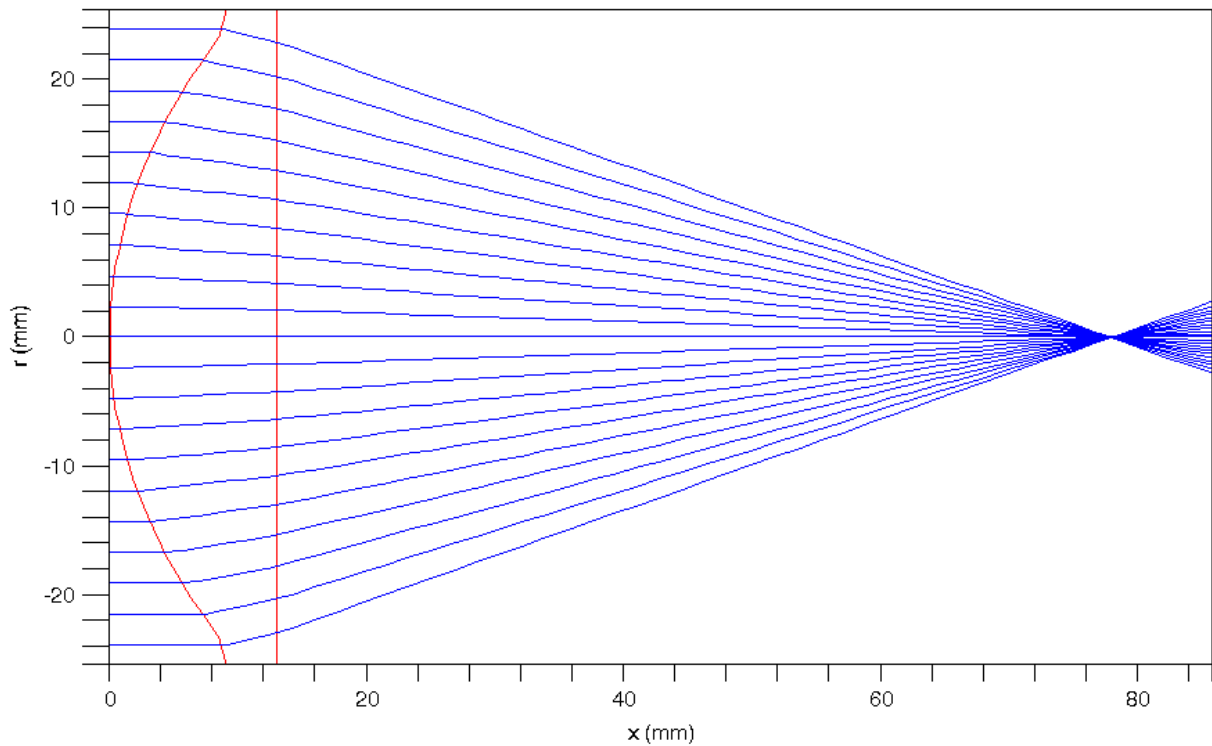
The TPX-D50.8-f65 is a plano-convex TPX (Polymethylpentene) lens for THz waves. It can be used to focus a collimated THz beam.

Lens parameters:	material	TPX (Polymethylpentene)
	refractive index n	1.45 @ 1 THz
	absorption coeff. α	0.3 cm^{-1}
	focal length	65 mm (distance flat surface – focus)
	outer lens diameter	50.8 mm
	free aperture diameter	47.8 mm
	maximum lens thickness	13 mm
	edge lens thickness	4.1 mm
	aperture angle α	19.5°
	numerical aperture NA	0.33



Airy disc diameter	$\nu = 300 \text{ GHz}$	1.7 mm
	$\nu = 1 \text{ THz}$	0.5 mm
	$\nu = 3 \text{ THz}$	$173 \mu\text{m}$

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

TPX lens 50.8 mm diameter, 65 mm focus length



Order information

Part number	Description	Photo
TPX-D50.8-f65-0	Unmounted TPX lens with diameter $D = 50.8$ mm and focal length $f = 65$ mm	
TPX-D50.8-f65-t12.7	Mounted TPX lens with diameter $D = 50.8$ mm and focal length $f = 65$ mm, tube length 12.7 mm	
TPX-D50.8-f65-t25.4	Mounted TPX lens with diameter $D = 50.8$ mm and focal length $f = 65$ mm, tube length 25.4 mm	