

## Data Sheet LTX-D50-FX

2" Convex TPX Lens



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## 1 General

The convex TPX lenses with a diameter of 2" / 50 mm have been developed for the control of THz radiation.

### Nomenclature

LTX-D50-FX

LTX-D50-FX	Type	Lens
LTX-D50-FX	Material	TPX
LTX-D50-FX	Form	Sphere / Asphere
LTX-D50-FX	Diameter	50 mm
LTX-D50-FX	Focal length	Var

Option:

LTX-D50-FX-MX	Mounting	Var
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## 2 Specification and Application Note

Table 1: Specification and Application Note of TPX lenses

Lens	LTA-D50-F35	LTA-D50-F65	LTA-D50-F85	LTA-D50-F100	LTS-D50-F200	LTS-D50-F250	
<b>Specification</b>							
Material	TPX / Polymethylpentene						
Refractive index	1.47						
Form	Asphere				Sphere		
Diameter [mm]	50.0 ± 0.1						
Thickness center [mm]	18.00	13.00	10.00	10.00	8.27	8.00	
	± 0.05						
Thickness edge [mm]	3.0	4.0	3.2	4.0	5.0	5.5	
<b>Application Note</b>							
Focal length [mm]	35.0	65.0	85.0	100.0	190.0	240.0	
Clear aperture [mm]	47.0	47.0	47.0	47.0	47.0	47.0	
Aperture angle [°]	32.5	19.2	15.1	12.9	6.6	5.3	
NA	0.53	0.33	0.26	0.22	0.12	0.10	
Airy Disc [mm]	0.3 THz	1.91	3.51	4.52	5.33	10.02	12.50
	1.0 THz	0.57	1.05	1.36	1.60	3.01	3.75
	3.0 THz	0.19	0.35	0.45	0.53	1.00	1.25

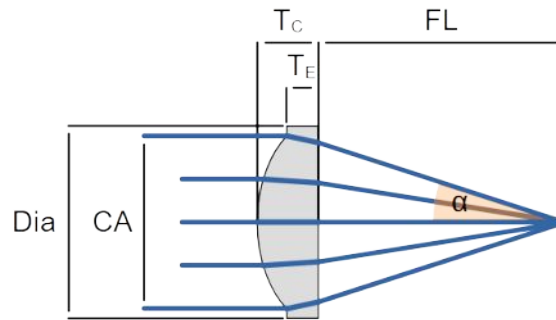


Figure 1: Principal drawing of a convex TPX lens

Dia	Diameter
T <sub>c</sub>	Thickness center
T <sub>e</sub>	Thickness edge
FL	Focal length
CA	Clear Aperture
α	Aperture angle

### 3 Mounting Options

The TPX lenses are sold alone by default. But they can be ordered in a lens tube<sup>1</sup> with SM1 thread for easy mounting:

LTX-D50-FX-M12.7	12.7 mm lens tube (length without external thread)
LTX-D50-FX-M25.4	25.4 mm lens tube (length without external thread)

<sup>1</sup> Outer diameter: 30.5 mm; 1x Internal SM1 thread: 1x External SM1 thread

## 4 Complementary TPX Lenses

We are offering the following complementary TPX lenses:

<a href="#">LTX-D25.4-FX</a>	1" Convex TPX Lens
<a href="#">LTX-D25.4-FMX</a>	1" Concave TPX Lens
<a href="#">LTX-D50-FMX</a>	2" Concave TPX Lens

Please check their individual data sheets for further details.

## 5 Contact Details

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