Data sheet TPX-D50.8-f100

Plano-convex TPX lens with diameter 50.8 mm and focal length 100 mm for THz application

Unmounted lens TPX-D50.8-f100-0  Mounted lens TPX-D50.8-f100-t12.7

Description
The TPX-D50.8-f100 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**: 100 mm (distance flat surface – focus)
- **outer lens diameter**: 50.8 mm
- **free aperture diameter**: 47.8 mm
- **maximum lens thickness**: 10 mm
- **edge lens thickness**: 4.0 mm
- **aperture angle α**: 13.1 °
- **numerical aperture NA**: 0.23

**Airy disc diameter**
- ν = 300 GHz  2.7 mm
- ν = 1 THz  0.8 mm
- ν = 3 THz  266 μm

**Lens tube**
- **outer diameter**: 30.5 mm
- **length**: 12.7 mm (½") or 25.4 mm (1")
Order information

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<td>Unmounted TPX lens with diameter D = 50.8 mm and focal length f = 100 mm</td>
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<td>TPX-D50.8-f100-12.7</td>
<td>Mounted TPX lens with diameter D = 50.8 mm and focal length f = 100 mm, tube length 12.7 mm</td>
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<td>Mounted TPX lens with diameter D = 50.8 mm and focal length f = 100 mm, tube length 25.4 mm</td>
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