Plano-convex TPX lens with diameter 25.4 mm and focal length 50 mm for THz application

The TPX-D25.4-f50 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:** 50 mm (distance flat surface – focus)
- **outer lens diameter:** 25.4 mm
- **free aperture diameter:** 22.4 mm
- **maximum lens thickness:** 7.0 mm
- **edge lens thickness:** 4.4 mm
- **aperture angle α:** 11.9 °
- **numerical aperture NA:** 0.21

**Airy disc diameter**
- \( \nu = 300 \text{ GHz} \): 2.89 mm
- \( \nu = 1 \text{ THz} \): 867 µm
- \( \nu = 3 \text{ THz} \): 289 µm

**Lens tube**
- **outer diameter:** 30.5 mm
- **length:** 12.7 mm (½”) or 25.4 mm (1”)
TPX THz lens

TPX lens 25.4 mm diameter, 50 mm focal length

Order information

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<tr>
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<th>Photo</th>
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<td>TPX-D25.4-f50-0</td>
<td>Unmounted TPX lens with diameter D = 25.4 mm and focal length f = 50 mm</td>
<td>![Photo]</td>
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<tr>
<td>TPX-D25.4-f50-t12.7</td>
<td>Mounted TPX lens with diameter D = 25.4 mm and focal length f = 50 mm, tube length 12.7 mm</td>
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<td>TPX-D25.4-505-t25.4</td>
<td>Mounted TPX lens with diameter D = 25.4 mm and focal length f = 50 mm, tube length 25.4 mm</td>
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