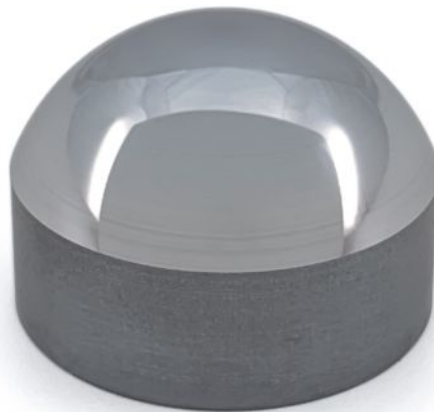


## Data Sheet LSA-D20-T14-F50

Focusing Silicon Lens



Patent DE 10 2006 037470 A1

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## 1 General

The focusing silicon lens ([LSA-D20-T14-F50](#)) with a diameter of 20 mm has been developed for the control of THz radiation from a GaAs PCA chip<sup>1</sup> and generates a focused THz beam.

## 2 Specification

|                                    |                          |
|------------------------------------|--------------------------|
| Diameter                           | 20.00 ± 0.05 mm          |
| Thickness center [T <sub>C</sub> ] | 14.00 ± 0.05 mm          |
| Thickness edge [T <sub>E</sub> ]   | 7.06 mm                  |
| Form                               | Asphere                  |
| Material                           | Silicon                  |
| Refractive index                   | 3.41                     |
| Transmittance                      | > 53 % (@ 0.1 - 3.0 THz) |

## 3 Application Note

An Anti-Reflex coating is available on request.

|                                      |          |
|--------------------------------------|----------|
| Collection angle [α]                 | 52.7°    |
| Convergence angle [β]                | 10.0°    |
| Focal length [FL]                    | 50.0 mm  |
| Thickness PCA chip [T <sub>P</sub> ] | 0.625 mm |

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<sup>1</sup> Gallium Arsenide Photo Conductive Antenna Chip

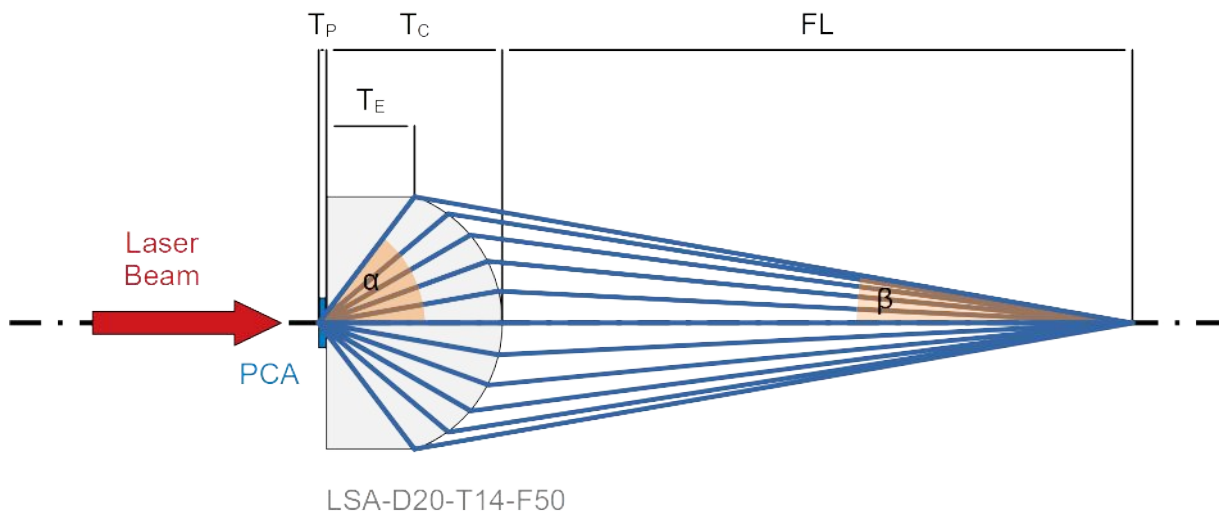


Figure 1: LSA-D20-T14-F50

## Airy Disc Diameter

|            |         |
|------------|---------|
| At 300 GHz | 3.60 mm |
| At 1 THz   | 1.10 mm |
| At 3 THz   | 0.36 mm |

## 4 Contact Details

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