Mounted PCA on collimating aspheric silicon substrate lens
Data sheet PCA-l-g-w-λ-c

Photoconductive antenna chip
Substrate semi-insulating GaAs
Chip area 4 mm x 4 mm
Thickness t 600 µm

Elliptic collimating silicon lens
Diameter 20 mm
Height h 13.8 mm
Distance d 14.4 mm
Material undoped HRFZ-silicon
Specific resistance $\rho > 10 \, \text{k}\Omega \text{cm}$
Refractive index n 3.4

Terahertz beam
Beam diameter 20 mm
Collection angle $\alpha$ 54.6°
**Aluminum mount**  
25.4 mm diameter, 6 mm thick

**Coaxial cable**  
type RG 174, impedance 50 Ω, 1 m long

**Connector type**  
BNC or SMA

- The PCA chip is optically adjusted and glued on the collimating aspheric silicon lens
- The silicon lens is glued on the aluminium mount.
- The two antenna contacts are wire bonded on a printed circuit board, which provides the connection to a 1m long coaxial cable with BNC or SMA connector
- A central hole in the aluminium mount allows the Terahertz radiation to escape from the aspheric silicon lens as a collimated beam.

Complete antenna with cable and BNC connector