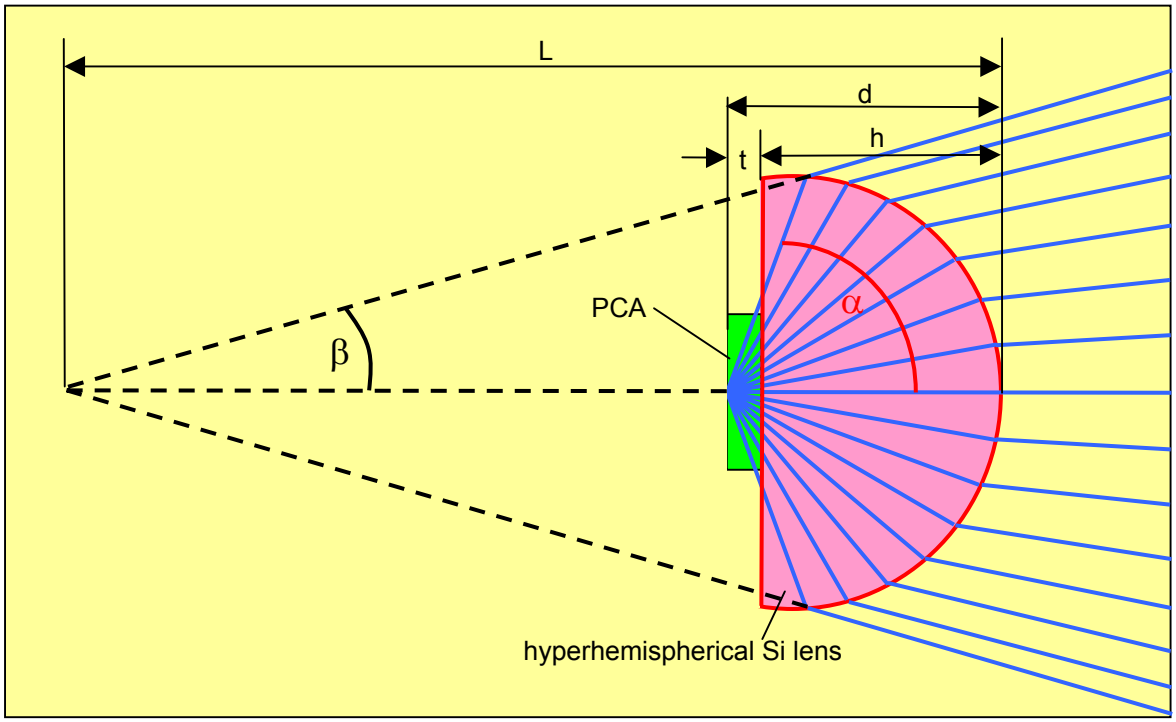
Mounted PCA on hyperhemispherical silicon substrate lens
data sheet PCA-I-g-w-λ-h

Photoconductive antenna	substrate	semi-insulating GaAs
	chip area	2 mm x 2 mm
	thickness t	600 µm
Hyperhemispherical lens	material	undoped HRFZ-silicon,
	specific resistance ρ	>10 kΩcm
	refractive index n	3.4
	diameter	12 mm
	height h	7.1 mm
	distance d	7.7 mm
Terahertz beam	collection angle α	57°
	divergence angle ß	15°
	virtual focus length L	26.4 mm



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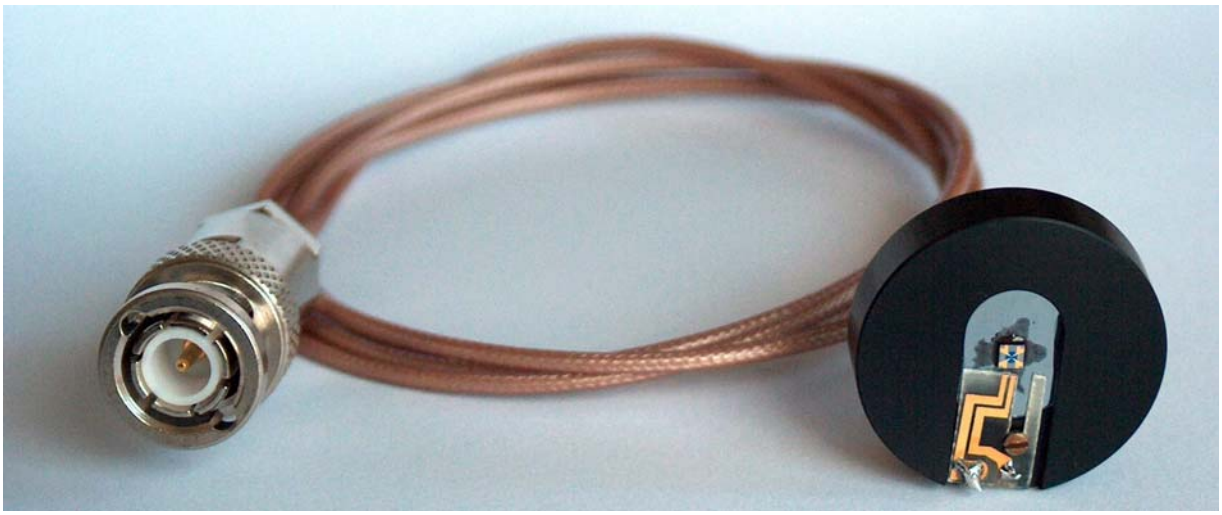
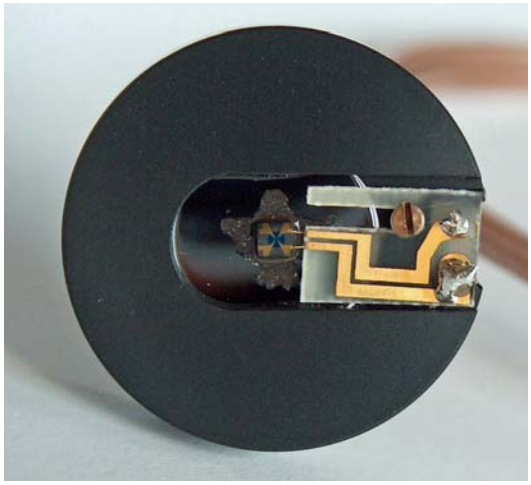
Aluminum mount	25.4 mm diameter, 6 mm thick
Coaxial cable	type RG178 B/U, impedance 50Ω, capacitance 96pF/m, 1 m long
Connector type	BNC or SMA

- The PCA chip is optically adjusted and glued on the hyperhemispherical silicon lens with a thermal conducting glue.
- The silicon lens is fixed on the aluminum mount with a thermal conducting glue.
- 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 aluminum mount allows the Terahertz radiation to escape from the hyperhemispherical silicon lens

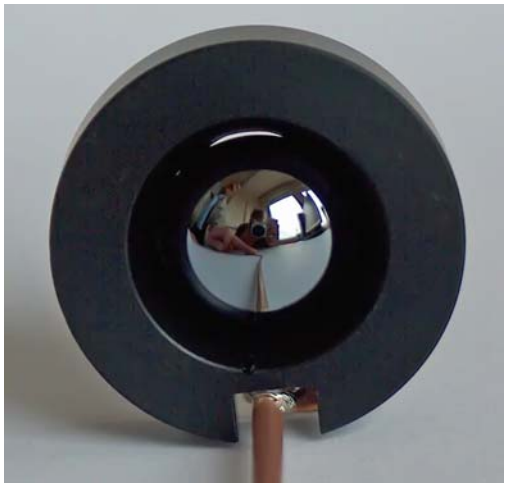
PCA with hyperhemispherical silicon lens, coaxial cable RG 178 and BNC connector



Front view on mounted PCA (laser side)



Back view on mounted PCA (THz side)



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