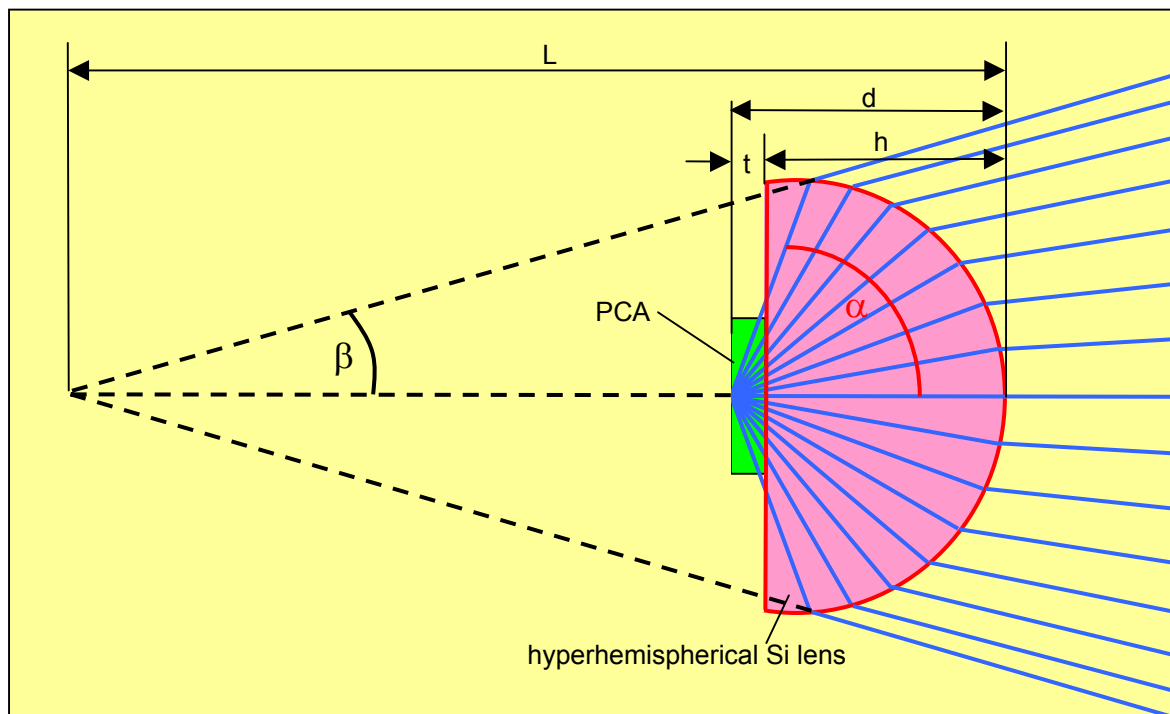


## Mounted PCA on **hyperhemispherical** silicon substrate lens data sheet PCA-I-g-w- $\lambda$ -h

<b>Photoconductive antenna</b>	substrate	semi-insulating GaAs
	chip area	6 mm x 6 mm
	thickness t	650 $\mu$ m
<b>Hyperhemispherical lens</b>	material	undoped HRFZ-silicon,
	specific resistance $\rho$	>10 k $\Omega$ cm
	refractive index n	3.4
	diameter	12 mm
	height h	7.1 mm
	distance d	7.7 mm
<b>Terahertz beam</b>	collection angle $\alpha$	57°
	divergence angle $\beta$	15°
	virtual focus length L	26.4 mm



### Aluminum mount 25.4 mm diameter, 6 mm thick

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Wildenbruchstraße 15  
D-07745 Jena  
Germany

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IBAN: DE49 8207 0024 0392 2655 00

VAT Reg. No: DE 813698804  
Tax Acc. No: 161/106/02514  
Local Court Jena HRB 112769

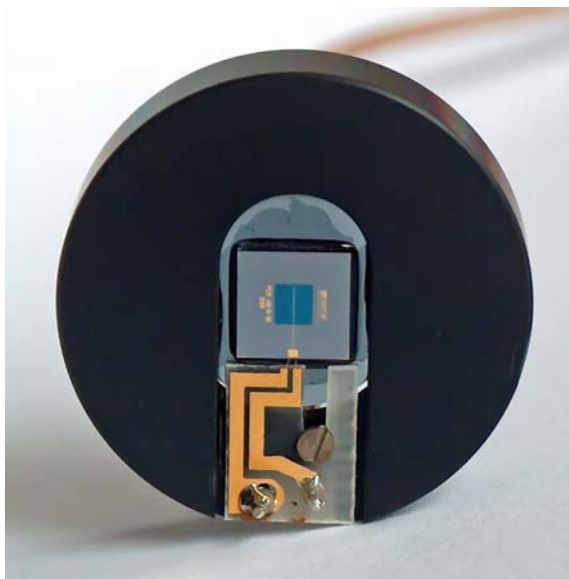
<b>Coaxial cable</b>	type RG178 B/U, impedance 50 $\Omega$ , capacitance 96pF/m, 1 m long
<b>Connector type</b>	BNC or SMA

- 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)

