

Instruction manual and data sheet PCA-40-10-10-1550-x

Photoconductive THz antenna for laser excitation wavelengths $\lambda \sim 1000 \text{ nm} \dots 1550 \text{ nm}$

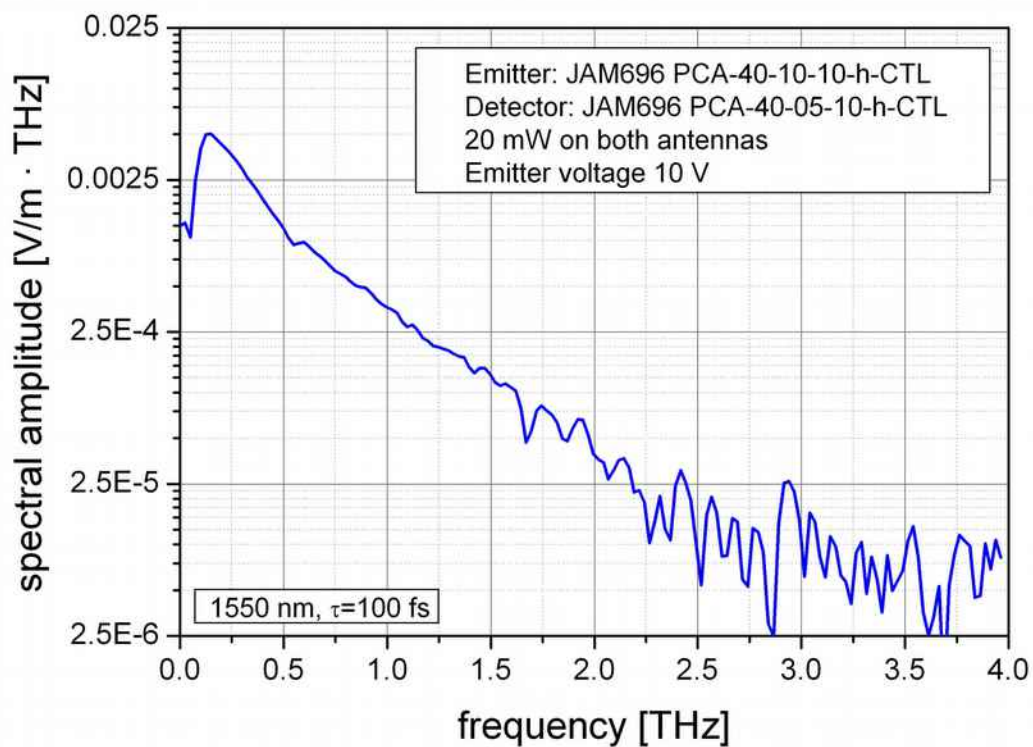
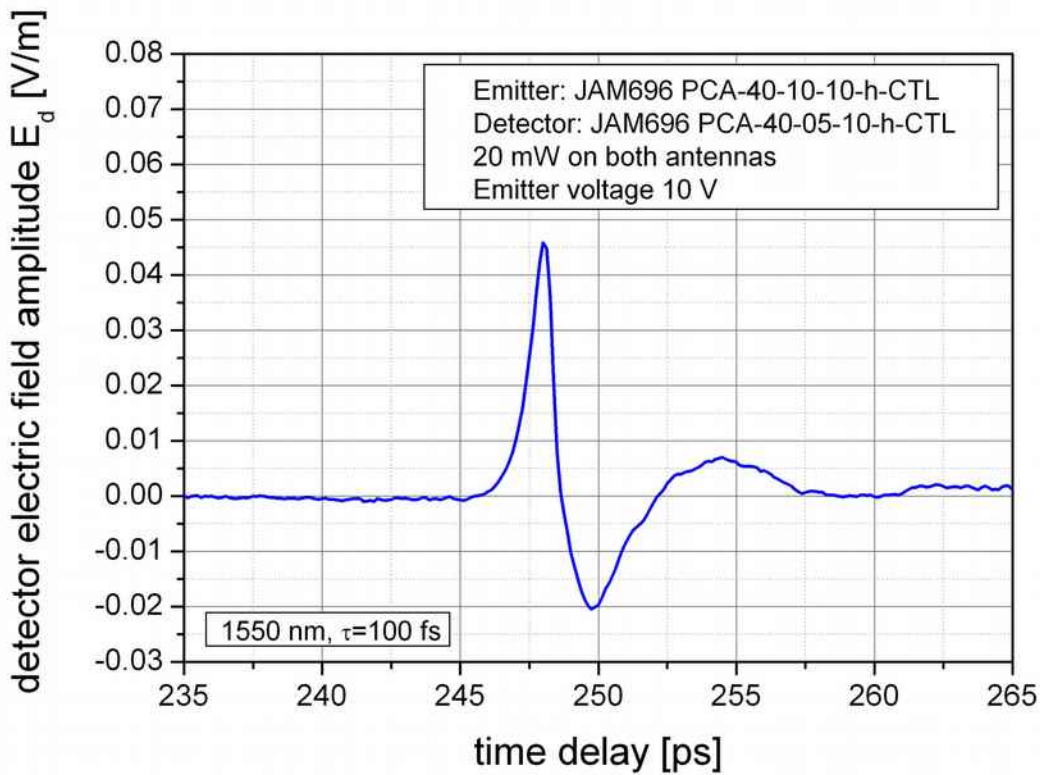
PCA – Photoconductive Antenna

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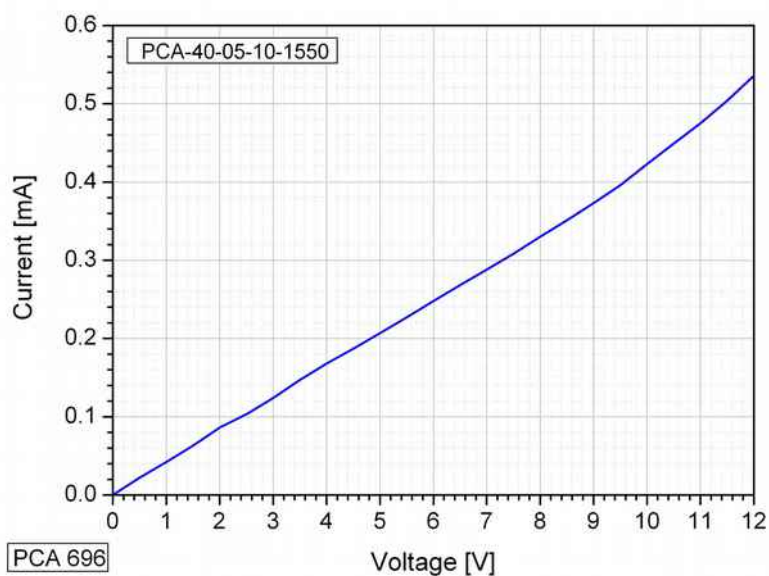
1. Spectral Performance



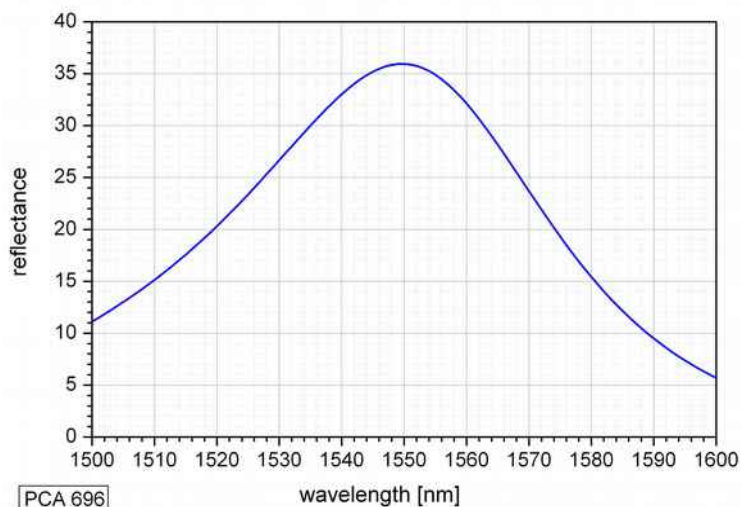
2. Antenna parameters

Parameter	minimum ratings	standard	maximum ratings
Dark resistance	14 k Ω	17 k Ω	20 k Ω
Voltage		8 V	10 V
Optical mean power		20 mW	30 mW

Dark current voltage characteristic



Spectral reflectance



3. Antenna Design

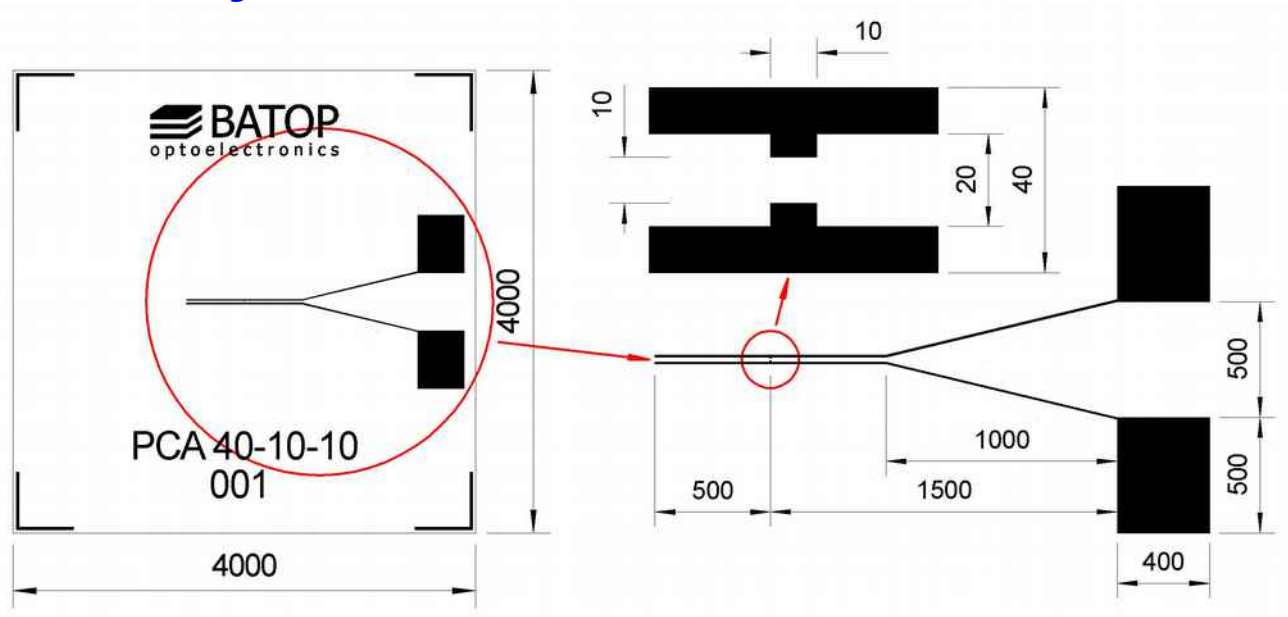


Photo PCA 40-10-10-1550
(survey)

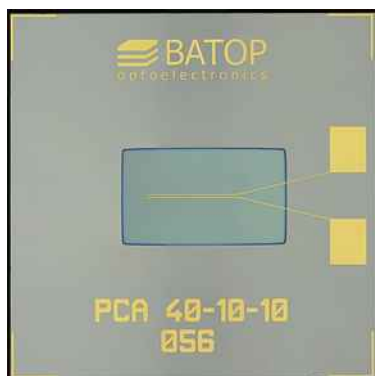


Photo PCA 40-10-10-1550

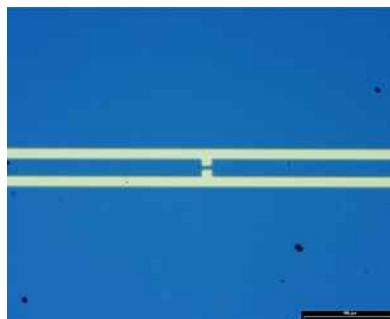
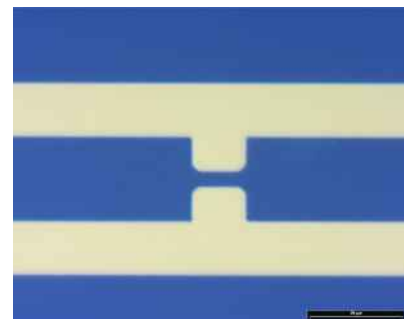
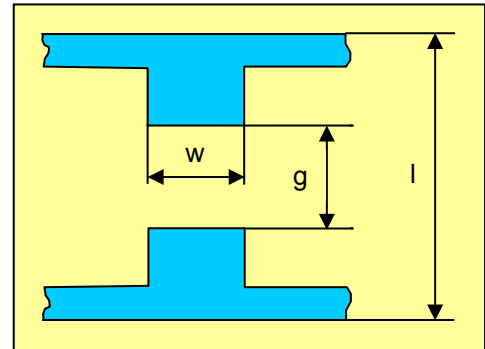


Photo PCA 40-10-10-1550
(detail)



4. Order information

PCA-40-10-10-1550-x Photoconductive antenna
 length $l = 40 \mu\text{m}$
 gap $g = 10 \mu\text{m}$
 width $w = 10 \mu\text{m}$
 laser wavelength $\lambda = 1550 \text{ nm}$
 (1000 nm ... 1550 nm)



x denotes the type of mounting as follows:

- x = 0** unmounted chip 2 mm x 2 mm with 4 bond contact pads
- x = h** mounted on an Al disc with 25.4 mm \varnothing and [hyperhemispherical silicon substrate lens](#), 1m coaxial cable with BNC or SMA connector
- x = a** mounted on an Al disc with 25.4 mm \varnothing and [aspheric focusing silicon substrate lens](#), 1m coaxial cable with BNC or SMA connector
- x = c** mounted on an Al disc with 25.4 mm \varnothing and aspheric collimating silicon substrate lens CL-12 for 12 mm THz beam diameter, 1m coaxial cable with BNC or SMA connector
- x = h-f** [fiber coupled antenna](#) with hyperhemispherical silicon substrate lens
- x = l** with [aspheric focusing optical lens](#) for free space laser excitation
- x = p** with [preamplifier](#) for detector antenna

For information about THz beam guiding possibilities please [click here](#)