

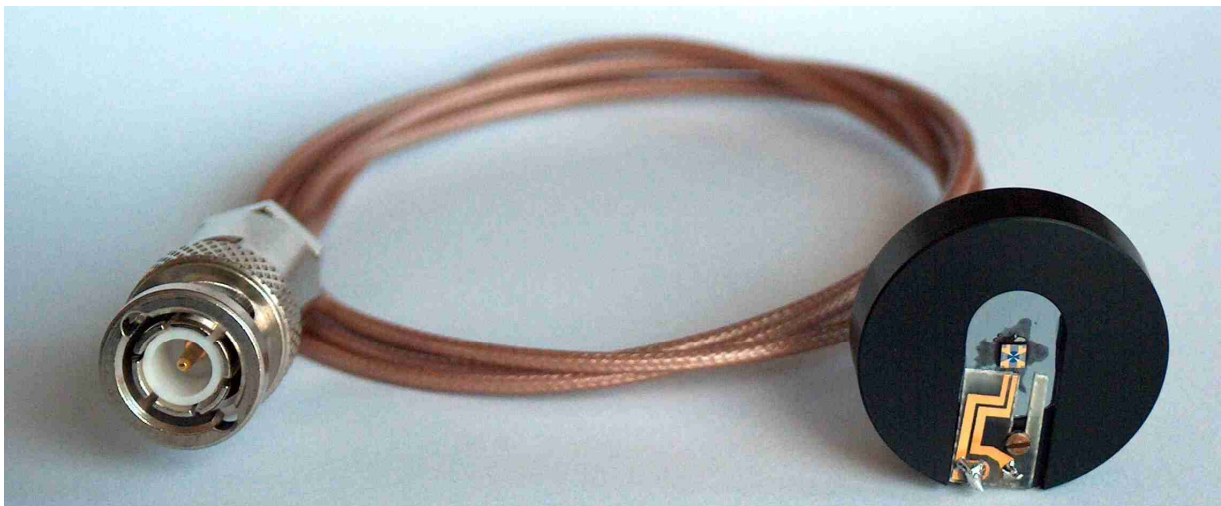
Instruction manual and data sheet PCA-44-34-100-800-x

Photoconductive THz antenna for laser excitation wavelengths $\lambda \sim 500 \text{ nm} \dots 850 \text{ nm}$

PCA – Photoconductive Antenna

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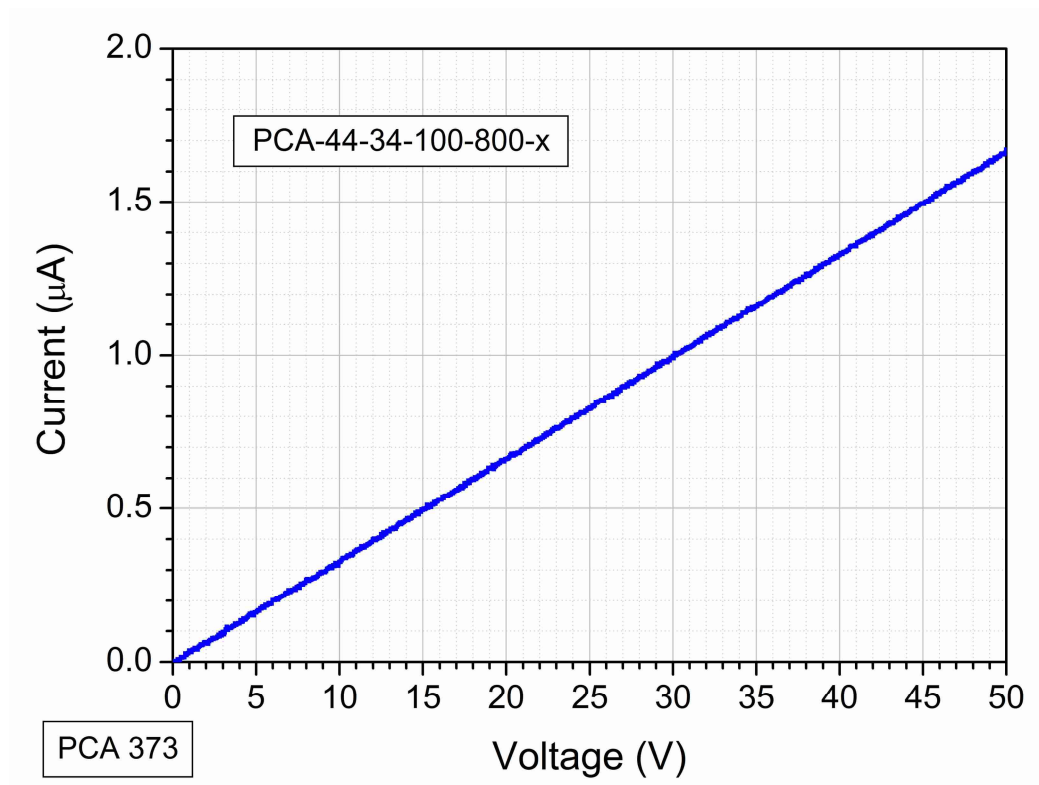
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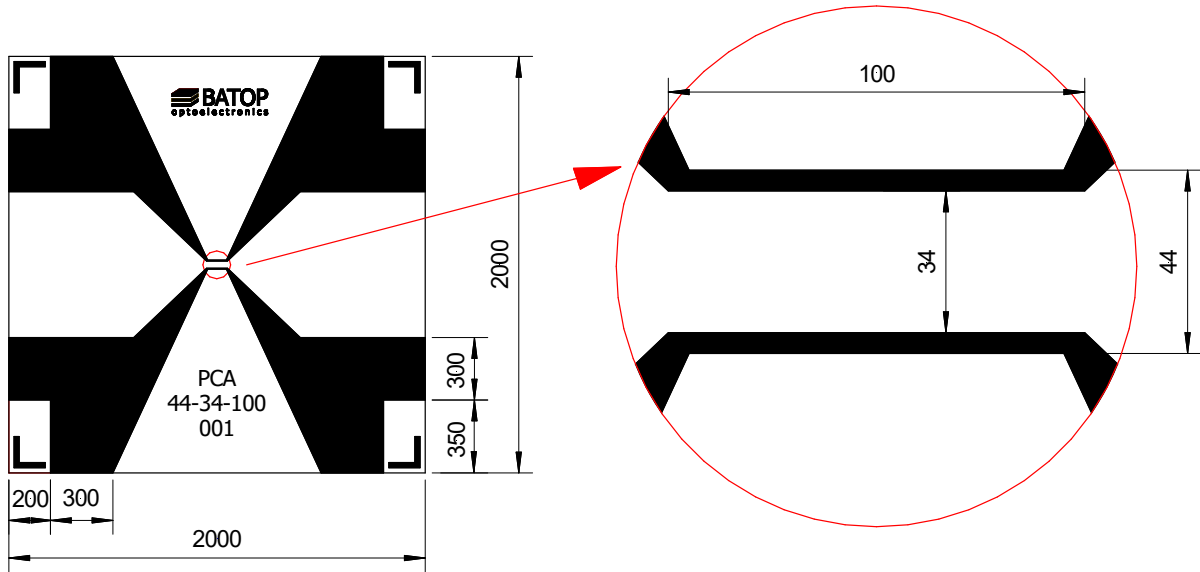
1. Antenna parameters

Parameter	minimum ratings	standard	maximum ratings
Dark resistance	20 M Ω	30 M Ω	40 M Ω
Voltage		60 V	100 V
Optical mean power		40 mW	50 mW

Dark current voltage characteristic



2. Antenna design



all dimensions in micrometers

Photo PCA 44-34-100 (survey)



Photo PCA 44-34-100

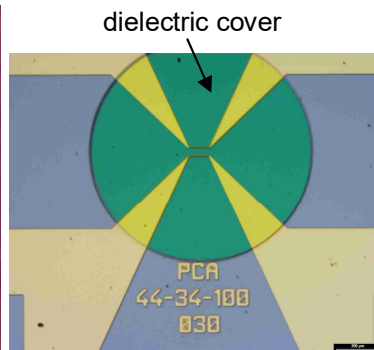
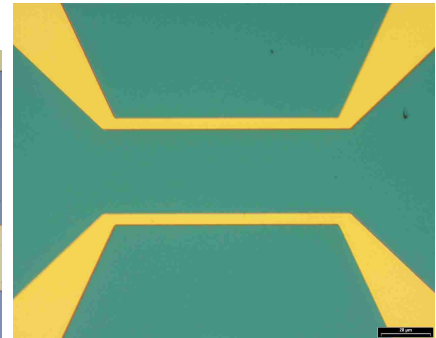


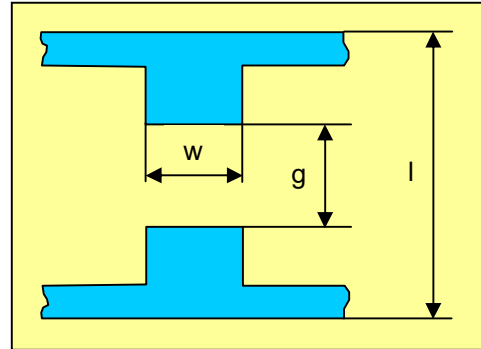
Photo PCA 44-34-100 (detail)



- Main PCA data**
- Laser excitation wavelength 800 nm
 - Antenna gap: 34 μm
 - Antenna length 44 μm
 - Antenna chip size 2 mm x 2 mm

3. Order information

PCA-44-34-100-800-x Photoconductive antenna
 length $l = 44 \mu\text{m}$
 gap $g = 34 \mu\text{m}$
 width $w = 100 \mu\text{m}$
 laser wavelength $\lambda = 800 \text{ nm}$
 (500 nm ... 850 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](#)