Instruction manual and data sheet PCA-44-16-16-800-x

Photoconductive THz antenna for laser excitation wavelengths λ ~ 500 nm … 850 nm

PCA – Photoconductive Antenna

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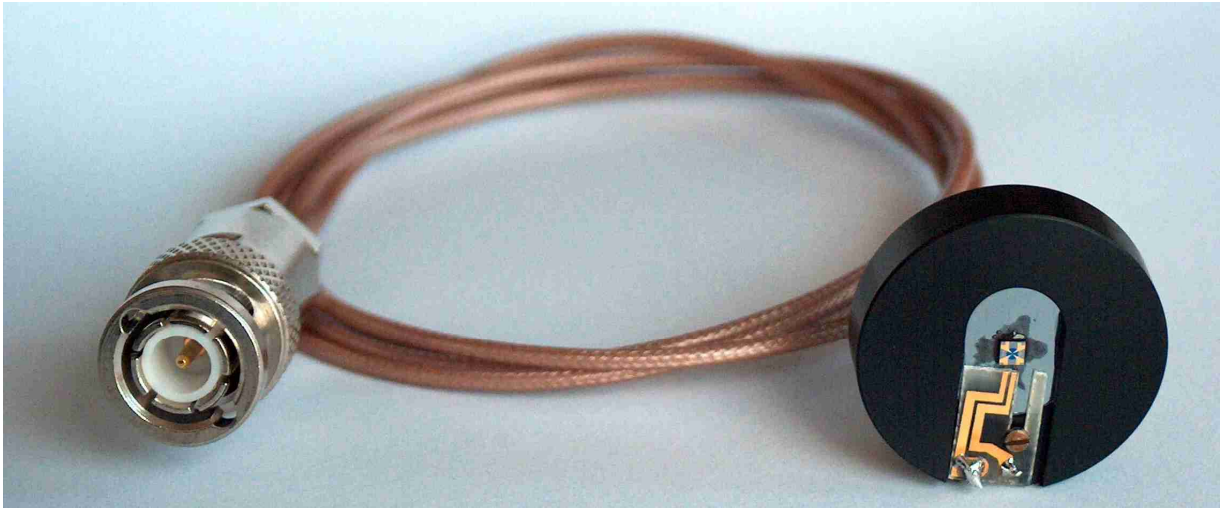
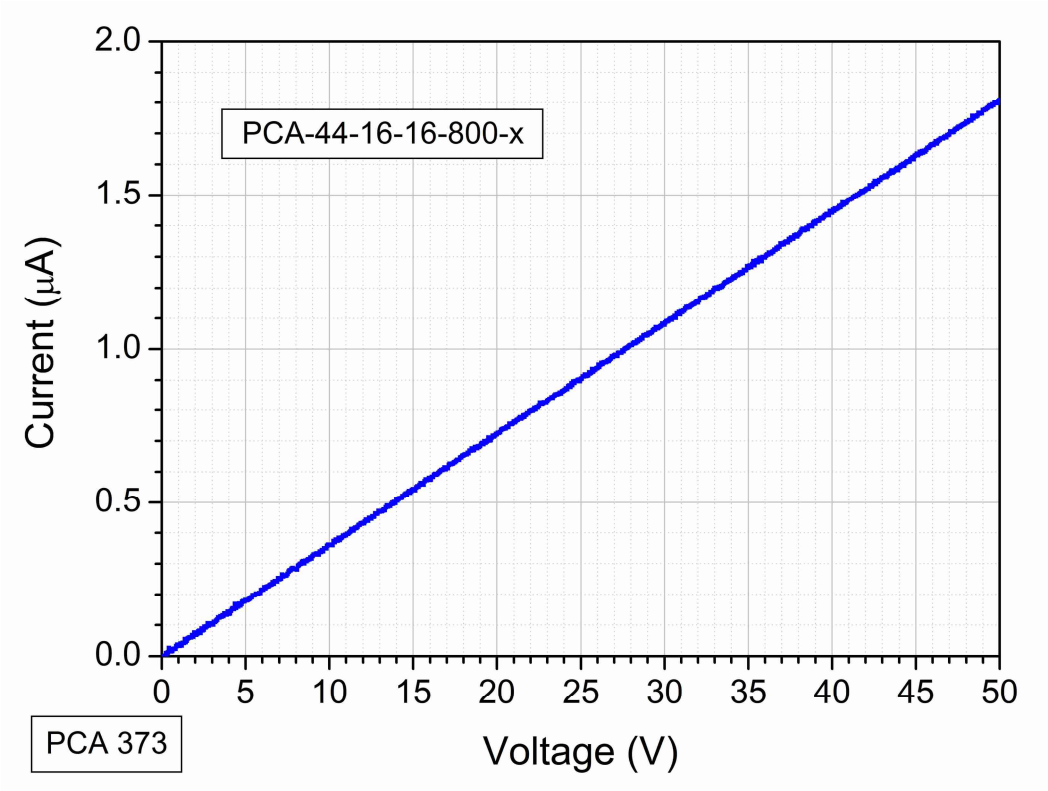


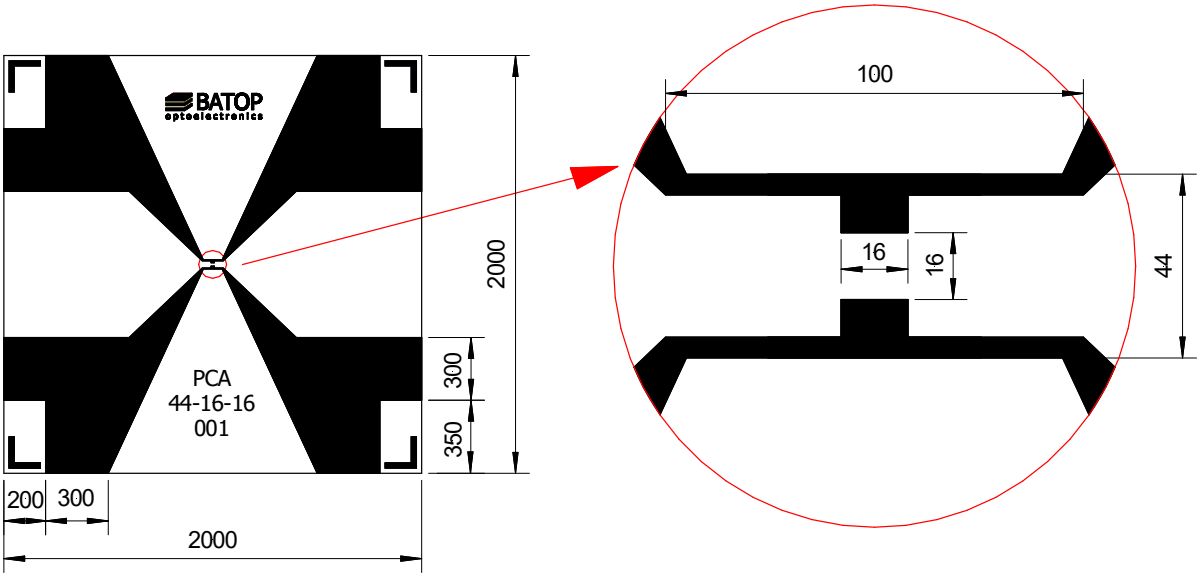
1. Antenna parameters

Parameter	minimum ratings	standard	maximum ratings
Dark resistance	10 MΩ	20 MΩ	30 MΩ
Voltage		40 V	50 V
Optical mean power		30 mW	40 mW

Dark current voltage characteristic



2. Antenna design



all dimensions in micrometers

Photo PCA 44-16-16 (survey)

Photo PCA 44-16-16

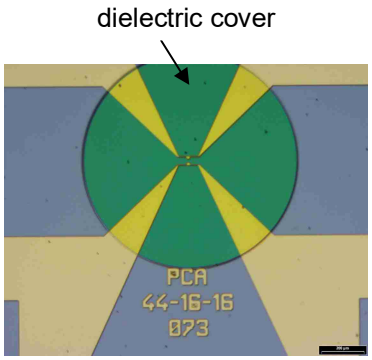
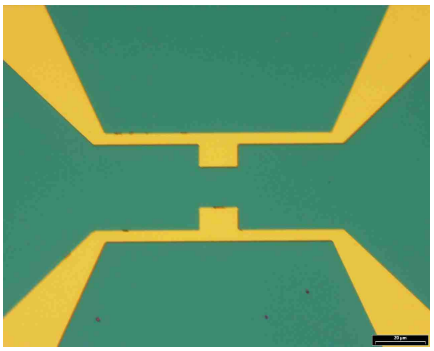


Photo PCA 44-16-16 (detail)



Main PCA data

- Laser excitation wavelength 800 nm
- Antenna gap: 16 µm
- Antenna length 44 µm
- Antenna chip size 2 mm x 2 mm

3. 3. Order information

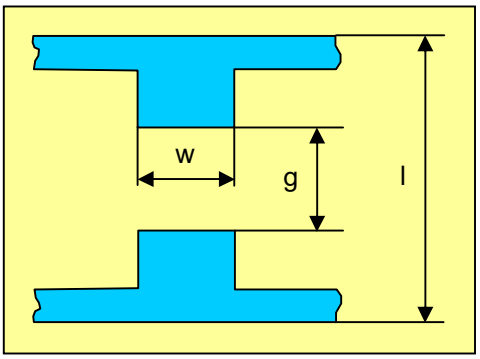
PCA-44-16-16-800-**x** Photoconductive antenna

length l = 44 µm

gap g = 16 µm

width w = 16 µm

laser wavelength λ = 800 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 ∅ and hyperhemispherical silicon substrate lens, 1m coaxial cable with BNC or SMA connector
x = a	mounted on an Al disc with 25.4 mm ∅ 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 ∅ 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