

## Instruction manual and data sheet SPCA-5Pi-05-3000-800-x

Broadband photoconductive antenna with  $5 \pi$  logarithmic spiral structure  
for laser wavelengths  $\lambda \sim 500 \text{ nm} \dots 850 \text{ nm}$

PCA – Photoconductive Antenna

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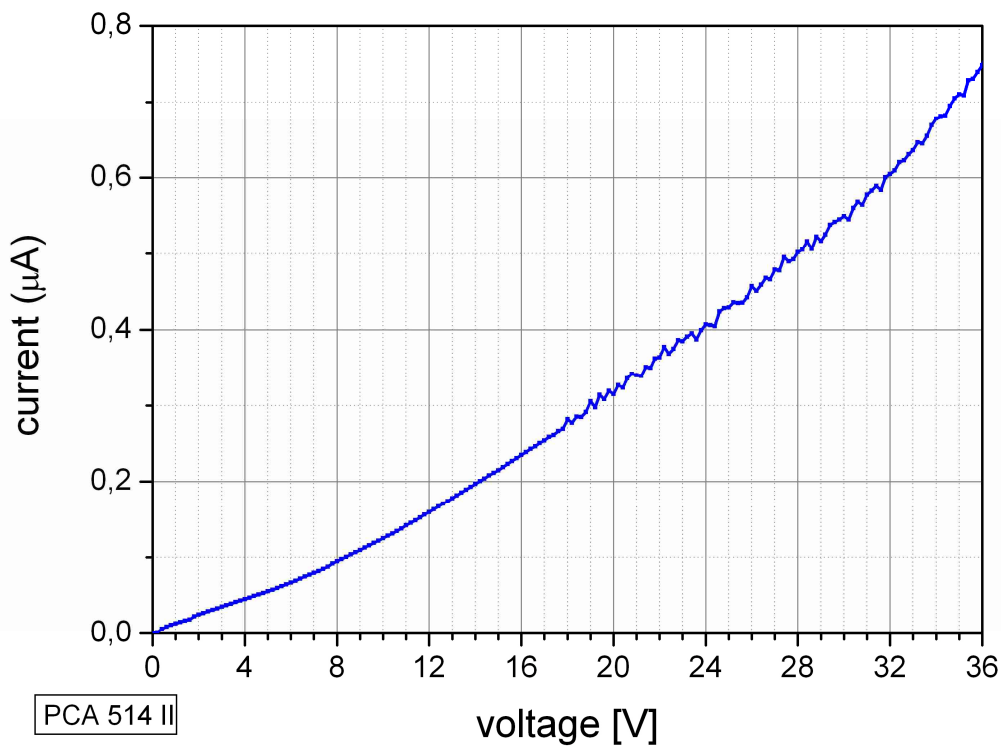
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## 1. Antenna parameters

Parameter	minimum ratings	standard	maximum ratings
Dark resistance	100 M $\Omega$	150 M $\Omega$	180 M $\Omega$
Voltage		15 V	20 V
Optical mean power		20 mW	30 mW

### Dark current voltage characteristic



## 2. Antenna design

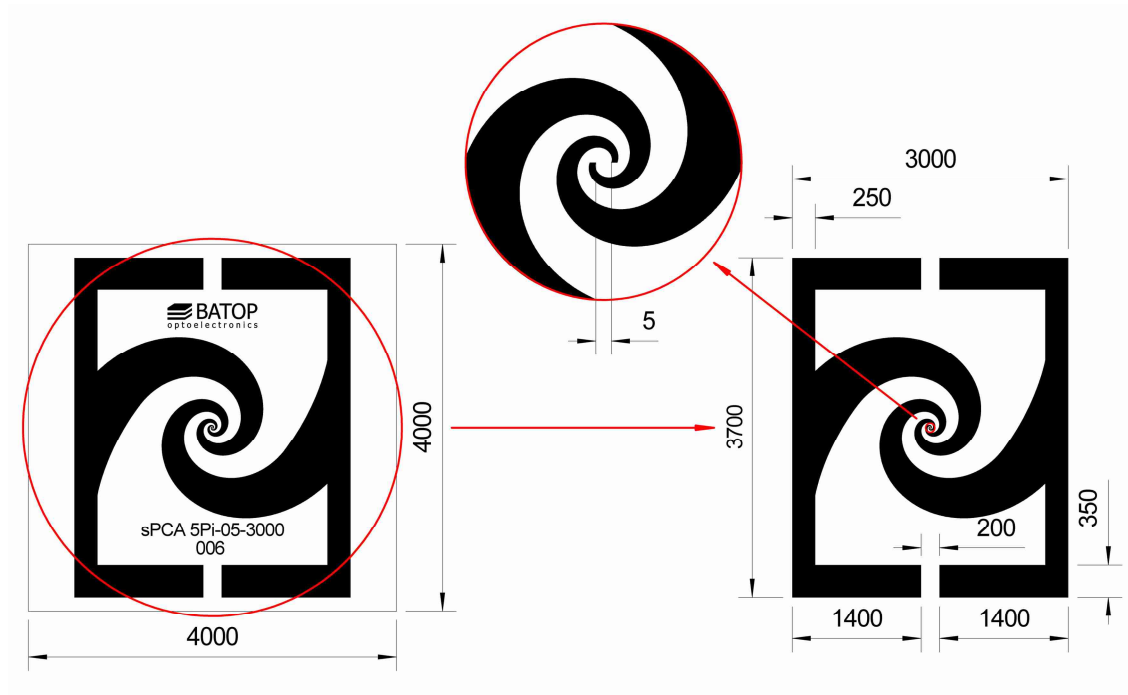
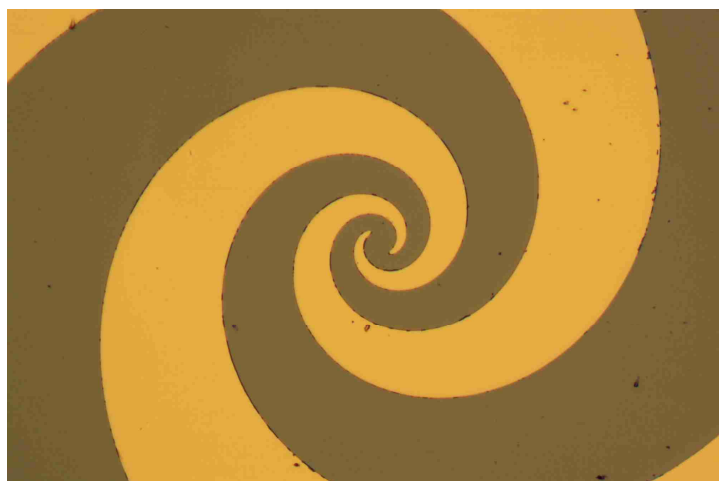


Photo SPCA 5Pi-05-3000 (survey)

Photo SPCA 5Pi-05-3000 (detail)

Dielectric cover



### 3. Order information

SPCA-5Pi-05-3000-800-x	logarithmic spiral photoconductive antenna
	spiral angle $4 \pi$
	gap distance $g = 5 \mu\text{m}$
	diameter of the spiral antenna $l = 3000 \mu\text{m}$
	laser wavelength $\lambda = 800 \text{ nm}$

**x** denotes the type of mounting as follows:

- x = 0** unmounted chip 4 mm x 4 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](#)