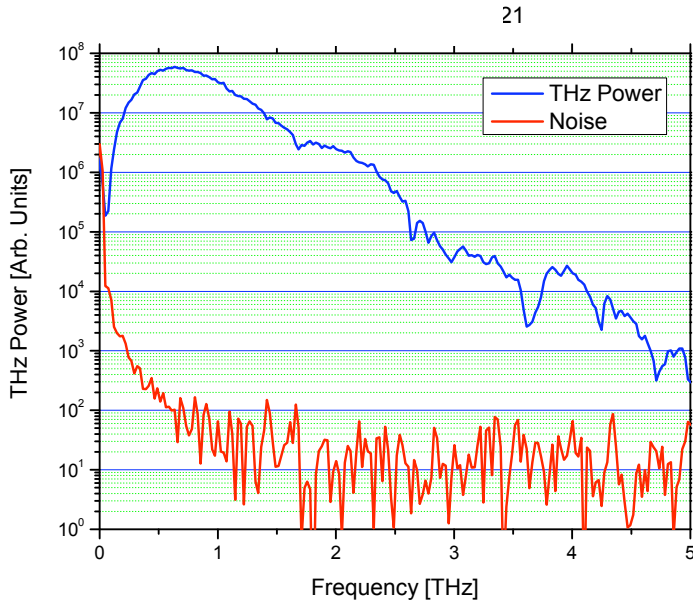


# THz Photoconductive Antennas



**ZOMEGA THZ**  
see the possibilities<sup>TM</sup>



**Figure 1:** Dipole antenna (PCA-LTGAAS-L50) measured with EO detection with <110> ZnTe (1mm thick), Pump beam: 780nm, 100 fs,

## Features

- Broadband THz emission
- High-repeatability mounting system
- Linear Polarization
- SMA or HVM-500USB connector

## Applications

- THZ Time Domain Spectroscopy for
  - Non-destructive testing
  - Non-contact measurement
  - Chem/Bio analysis & characterization

## Specification

PART #	MATERIAL	GAP SIZE	V <sub>MAX</sub> <sup>1</sup>	P <sub>MAX</sub> <sup>2</sup>
PCA-GAAS-D15	SI GaAs	150 μm	150 V	200 mW
PCA-GAAS-D20	SI GaAs	200 μm	200 V	300 mW
PCA-GAAS-E <sup>3</sup>	SI GaAs	50 μm	50 V	50 mW
		100 μm	100 V	100 mW
		150 μm	150 V	200 mW
		200 μm	200 V	300 mW
PCA-LTGAAS-E <sup>3,4</sup>	LT GaAs	50 μm	150 V	50 mW
		100 μm	200 V	100 mW
		150 μm	300 V	200 mW
		200 μm	400 V	300 mW
PCA-LTGAAS-L50	LT GaAs	50 μm	150 V	50 mW
PCA-GAAS-BT40	SI GaAs	40 μm	40 V	50 mW
PCA-LTGAAS-BT## <sup>4</sup>	LT GaAs	5 μm	10 V	15 mW
		10 μm	20 V	25 mW
		20 μm	40 V	40 mW
		40 μm	80 V	80 mW

1. Maximum bias amplitude for safe, long-term operation of antenna without degradation
2. Maximum pump beam intensity recommended to prevent antenna damage, assuming 100fs pulses and a repetition rate from 20 - 100 MHz. Shorter pulse durations or lower repetition rates may require lower pump power.
3. Series 'E' antennas contain 50, 100, 150 and 200μm gap antennas on them which can be jumper selected from the antenna mount. These antennas also have a 5μm dipole that can be used for detection (LT GaAs only).
4. Available March 2009

