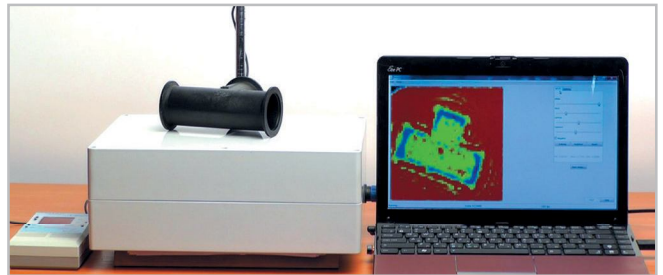
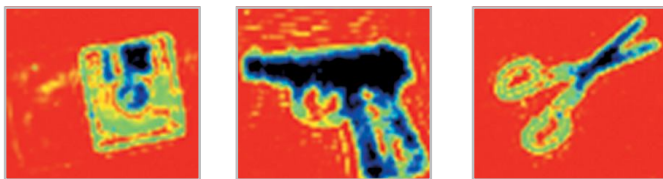


# Sub-THz semiconductor imaging camera

- 0.05 - 0.7 THz frequency range
- High responsivity
- Room temperature
- 1 year warranty
- Compact and low cost
- Video regime (24 Hz)
- Customer-focused solutions



## DESCRIPTION

Terasense has developed an original patent-protected technology for making a new type of semiconductor detectors for sub-THz rays operating at room temperatures. The detectors can be combined into a compact and rather inexpensive sensor array (similar to CCD/CMOS sensors in a photo camera). The Company is developing imaging applications for THz and sub-THz frequency ranges based on its sensors.

The detectors proposed by Terasense have good responsivity comparable with other available detectors working in sub-THz range (0.1 – 0.7 THz), but in contrast they are low-cost, has uniform pixel-to-pixel sensitivity (pixel-to-pixel deviation of the responsivity is less than 20%) and they can be easily produced in large quantities in the form of 2D array thanks to compatibility of the Terasense technology with mass semiconductor manufacturing lines. Therefore, the detectors are suitable for use in the sub-THz camera without any moving parts.

## SPECIFICATIONS

Model Name	Tera-256	Tera-1024	Tera-4096
Number of pixels	256 (16 x 16)	1024 (32 x 32)	4096 (64 x 64)
Pixel Size	1.5 x 1.5 mm <sup>2</sup>	1.5 x 1.5 mm <sup>2</sup>	1.5 x 1.5 mm <sup>2</sup>
Responsivity	50 kV/W	50 kV/W	50 kV/W
Noise Equivalent Power	1 nW/Hz <sup>0.5</sup>	1 nW/Hz <sup>0.5</sup>	1 nW/Hz <sup>0.5</sup>
Device Size	10 x 10 x 5.5 cm	10 x 10 x 5.5 cm	20 x 20 x 10 cm

## TERASENSE

Terasense has a strong team of 20 skilled scientists and engineers. Most of them are young specialists with Ph.D. in the field of microwave and terahertz research representing young generation of Russian physicists. Scientific results of the group have been published in more than 300 papers in international peer-reviewed journals. The team is led by corresponding member of Russian Academy of Sciences Prof. Igor Kukushkin, CEO.