

SUB-TERAHERTZ SOURCES



- ✓ IMPATT technology
- ✓ 100 GHz, 140 GHz, 200 GHz and 300 GHz available frequencies
- ✓ Protective isolator for enhanced stability
- ✓ TTL Modulation
- ✓ High-frequency modulation option (100 MHz, 1.5 ns rise/fall time)
- ✓ Detachable horn antenna
- ✓ Low cost and compact size
- ✓ 1 year warranty

Description

TeraSense series of terahertz sources (IMPATT diodes) are silicon double drift diodes with a 0.6 μm transit region, mounted on the copper heat sink. The layers in double-drift diodes are a heavily doped (p⁺)-region, a moderately doped p-region, a moderately doped n-region, and a heavily doped (n⁺)-region. The (p⁺) — and (n⁺) — regions allow ohmic electrical contacts to be made to the external circuit. The device relies on negative resistance to generate and sustain an oscillation.

Terasense is now offering its upgraded version of the terahertz source. The upgraded IMPATT diode is outfitted with a protective isolator, which significantly improves output power stability. From now on you can order an IMPATT diode with either an open WR- flange or detachable horn antenna of your choice. Typical output rfpower of THz source with optimized frequency @ 100 GHz can reach up to 2 W.

THz source

100 GHz

~ 80 / 180 / 400 mW
0.8 W / **1.8 W**
output power

Conical horn antenna /
Flange type output

Protective Isolator
TTL Modulation

THz source

140 GHz

~ 30 / 90 / 180 mW
300 / **600 mW**
output power

Conical horn antenna /
Flange type output

Protective Isolator
TTL Modulation

THz source

200 GHz

~ 40 / 80 / **180 mW**
output power

Diagonal horn antenna /
Flange type output

TTL Modulation

THz source

300 GHz

290 GHz > 10 mW
280 GHz > 20 / 40 mW
output power

Diagonal horn antenna /
Flange type output

TTL Modulation

About TeraSense

TeraSense is a manufacturer of low-cost portable sub-terahertz imaging cameras, generators and ultrafast detectors. Our products balance at the cutting edge of scientific and technological breakthroughs. The company is a very strong team of 20 highly skilled scientists and engineers bringing a wealth of experience in the field. TeraSense has a steady growing global outreach supported by a very wide network of authorized distributors available in more than 30 countries of the world.