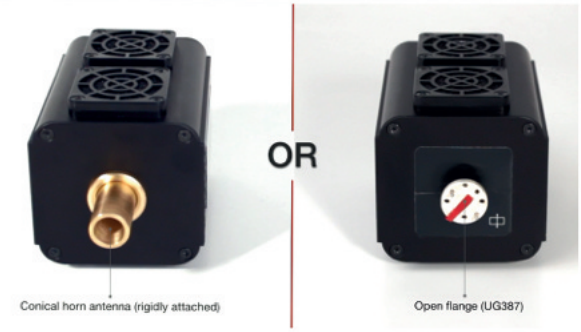
SUB-THZ OSCILLATORS (IMPATT DIODES)



- ✓ 100 GHz and 140 GHz frequencies
- ✓ 80 mW and 30mW power output
- ✓ Protective isolator for enhanced stability
- ✓ TTL Modulation with 1µs rise/fall time
- ✓ Horn antenna or open flange options
- ✓ Low cost and compact size
- ✓ 1 year warranty

DESRCIPTION

IMPATT diodes (IMPact ionization Avalanche Transit-Time) are high-power sub-THz radiation sources. Their main advantages are high-power capability and small size. IMPATT diodes are operated typically over a narrow frequency band, and their internal dimensions correlate with the operating frequency.

Terasense series of IMPATT diodes are silicon double-drift diodes with a 0.6µm transit region, mounted on 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 provides for ohmic electrical contacts to the external circuit. The devices rely on the negative differential resistance to generate and sustain oscillations.

TeraSense now offers an upgraded version of IMPATT diodes, which are outfitted with a protective isolator for better output power stability. Our IMPATT diodes can be ordered either with a high gain horn antenna or WR- flange of your choice.

SPECIFICATIONS

- Narrow-band THz source factory tuned to frequencies ~ 100 GHz or ~ 140 GHz
- High power output ~80 mW (100GHz) and ~30mW (140GHz)
- Protective isolator for better output power stability
- Typical line width can be narrowed down to 1 MHz
- TTL Modulation with 1µs rise/fall time
- High gain horn antenna or open flange (WR- type) options available
- External power adapter 24 V to ensure stable amperage input; 2W input power
- 1 year warranty period

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 has a very strong team of 20 highly skilled scientists and engineers bringing a wealth of experience in the field. TeraSense has a steadily growing global outreach supported by a very wide network of authorized distributors available in more than 30 countries of the world.

TeraSense
Terahertz imaging systems

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