

TUNABLE TERAHERTZ SOURCES



Our new **TeraSmart Series tunable terahertz sources** are built on advanced broadband Schottky diode multiplier chains, delivering reliable, high-performance operation across a wide range of frequencies. TeraSense currently offers models covering the following frequency bands: **50-75 GHz, 60-90 GHz, 75-110 GHz, 110-170 GHz, 170-260 GHz, 220-330 GHz, and 330-500 GHz.**

With average output power reaching several hundred milliwatts, TeraSmart sources provide an outstanding balance between wide tunability and high output power, making them among the most competitive multiplier-based sources available today.

Each TeraSmart generator features a compact dual-module architecture consisting of a **20 GHz pump oscillator** and a dedicated amplifier/multiplier unit. The result is a fully integrated, plug-and-play platform designed for straightforward installation and dependable operation.

All units can be remotely controlled through an intuitive software interface. Communication is handled via USB using ASCII text commands, enabling easy integration into automated laboratory and industrial systems. The supplied software package also includes an open-source LabVIEW interface, allowing users to quickly adapt control functions to their own workflows. Moreover, the appropriate output horn antennas can be provided for each device model as optional add-on elements.

RF frequency band	Input	Typical output power		Multiplication factor	Output waveguide port
50 - 75 GHz	12.5 - 18.8 GHz	+16 dBm	40 mW	x4	WR-15
60 - 90 GHz	10 - 15 GHz	+16 dBm	40 mW	x6	WR-12
75 - 110 GHz	12.5 - 18.3 GHz	+15 dBm +26 dBm	30 mW 400 mW	x6	WR-10
110 - 170 GHz	9.2 - 14.2 GHz	+3 dBm +17 dBm	2 mW 50 mW	x12	WR-6
170 - 260 GHz	10.6 - 16.3 GHz	+6 dBm	4 mW	x16	WR-4.3
220 - 330 GHz	12.2 - 18.3 GHz	+8 dBm	6 mW	x18	WR-3
330 - 500 GHz	9.1 - 13.9 GHz	0 dBm	1 mW	x36	WR-2.2