Multi-band THz source

TeraCascade 2000 series

The high-performance solution of the TC series range

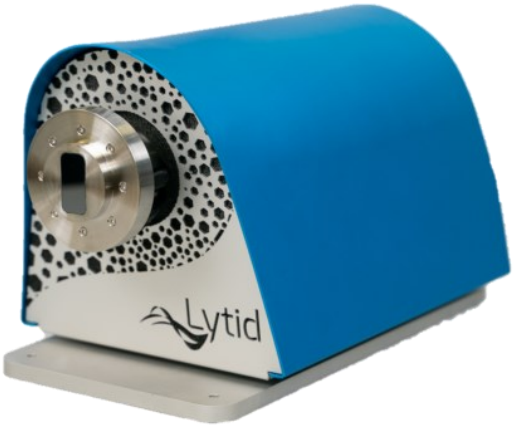
Powerful with >1 mW average power garanteed

Up to six (6)electronically switchable bands from 2 to 5 THz

Permanent vacuum with cryogenic-free cooling

Programmable with dedicated software

Powerful QCL technology



Lytid's award-winning TeraCascade 1000 series now is upgraded! Based on state-of-the-art quantum cascade laser technology, TeraCascade 2000 series is the new perfect tool to explore the supra-THz frequency range. It has kept all advantages of former generation: multiple frequency options, powerful output, automatedly-controlled cooling process. In addition, a higher/permanent vacuum level is achieved with the new design, giving rise to a low-maintenance device. Pumping step is no more required during the daily use of the source. In combination with automatically controlled cryogenic-free cooling, TeraCascade 2000 is a literally plug and play, ease-of-use system. With up to 6 chips at selected frequencies between 2 to 5 THz in one system, TeraCascade 2000 series guarantees average output power of more than 1 milliwatts in CW or QCW for each band. The integrated custom QCL driver provides instantaneous electronic switching between the frequency bands and it is fully programmable with dedicated software to control all input parameter via a USB connection to a PC. An automated beam collimator module for multi-band operation is available separately. As conclusion, TeraCascade 2000 is a flexible and powerful instrument for supra-THz applications.

Front side

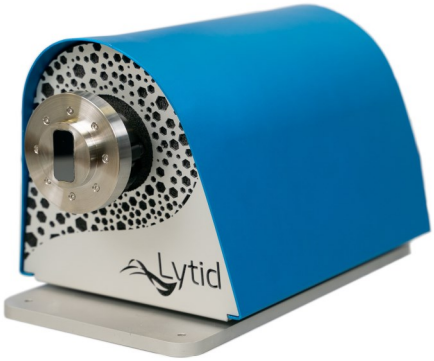
Back side

Features:

- Multi-band THz QCL source
- Milliwatts level average power
- Cryogen-free cooling
- Permanent vacuum chamber
- Easy configuration
- Fully programmable
- Compact, plug and play system

Applications:

- Real-time THz imaging
- High-definition THz imaging
- Heterodyne instrumentation
- High-resolution spectroscopy



Easy multi-band access:

- ✓ Electronic switching between the bands
- ✓ Remote control using dedicated software via USB

Connectivity:

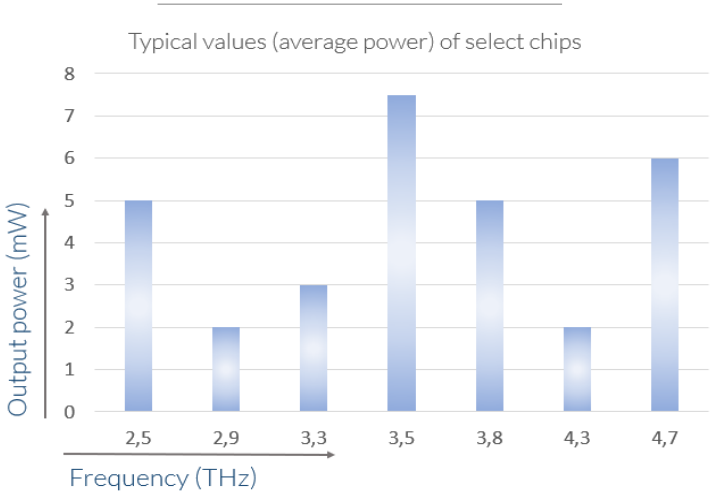
- ✓ GATE IN: Slave input for THz cameras
- ✓ GATE OUT: Elec. chopper signal to lock-in
- ✓ LASER IN: Direct connection to the QCL chip

Cryogen-free:

- ✓ Automatically controlled Stirling engine

Compact:

- ✓ Tabletop device
- ✓ Weight : 10 Kg



Specifications	TC2000
Optical data	
Frequency bands	Up to 6 in the range 2-5 THz
Wavelengths	From 150 to 60 mm
Average output power	> 1mW
Spectrum	Multimode or single-mode
Output beam	~35° FWHM
Operating data	
Cooling system	Stirling engine (cryogen free)
Operating temperature	40 K
Dimension and weight	
Dimensions	23 x 23x43 cm
Weight	<10 Kg
Options	
Vacuum pump and adapters	✓
6-band auto-alignment module	✓

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Empower your application