Multi-band THz source

TeraCascade 2000 series

The high-performance solution of the TC series range

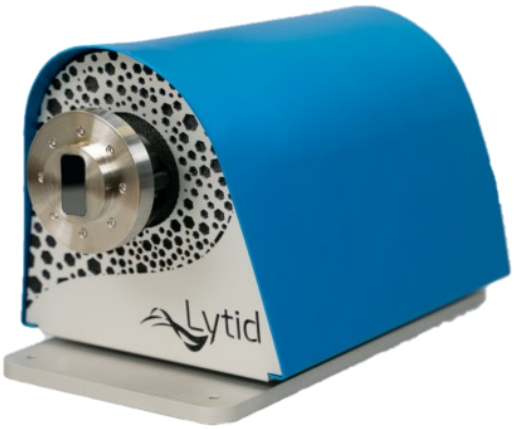
High output power of several mWs in (quasi) continous wave

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

High-level vacuum with cryogen-free cooling

Programmable with dedicated software

Excellent stability and beam profile



Lytid's award-winning TeraCascade 1000 series goes into its second generation! 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 the advantages of former generation: multiple frequency options, high output power, plug-and-play operation. In addition, a semi-permanent vacuum is achieved with the new design, giving rise to a low-maintenance device. In combination with automatically controlled cryogenic-free cooling, TeraCascade 2000 is a truly plug and play and easy to use system. With up to 6 QCL chips at discrete 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 remote USB connection. An automated beam collimator module for multi-band operation is available separately. In particular, TeraCascade 2000 can be upgraded to TeraEyes-HV, a high-resolution, real-time imaging solution., allowing to explore more possibility for THz imaging applications.

Front side

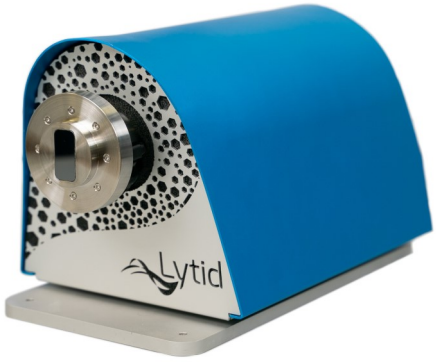
Back side

Features:

- Multi-band THz QCL source
- Milliwatts level average power
- Cryogen-free cooling
- Compatible with TeraEyes-HV
- Easy configuration
- Fully programmable
- Compact, plug and play system

Applications:

- Real-time THz imaging
- High-definition THz imaging
- High-resolution spectroscopy
- Detector characterization



Easy multi-band access:

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

Connectivity:

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

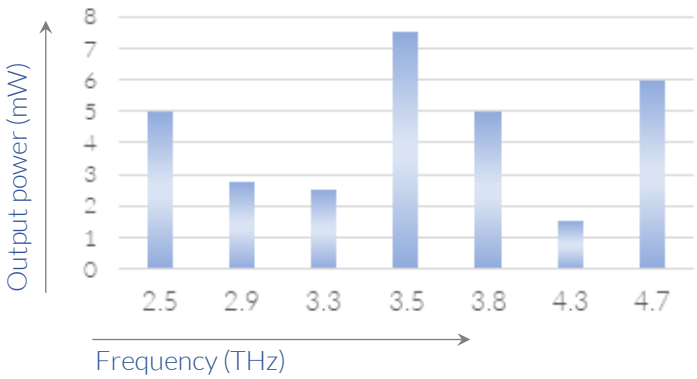
Cryogen-free:

- ✓ Automatically controlled Stirling cooler

Compact:

- ✓ Tabletop device (23x 23x 43 cm)
- ✓ Weight : 10 Kg

Typical values (average power) of select chips



Specifications	TC2000
Optical data	
Frequency bands	7 available QCL chips
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	✓
Auto-alignment module	✓

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Empower your application