

# Terahertz laser source

## ➤ TeraCascade 100 series

The cost-effective solution of the TC series range

Based on QCL technology

Powerful with  $> 100\mu\text{W}$

Single or Multi-mode

From 2 to 5 THz

Modular system



The TeraCascade 100 series is a cost-effective THz source based on state of the art quantum cascade laser technology. It is the perfect tool to explore the high THz frequency range. With an average output power of more than 100 microwatts from 2 to 5 THz, single or multimode emission, you can perform many applications such as high resolution THz raster scan imaging, detector characterization or calibration. The sys-

tem is safe and easy to use even with a nitrogen cooling system, thanks to the custom-made driver and electronics of the TC Driver, available separately. It which allows to control via a touchscreen or remotely via a computer all laser parameters, making it the most flexible and user-friendly QCL system on the market. The TC100 series is the perfect tool to explore the high THz frequency range.



#### Control:

- ✓ Fully compatible with TC Driver (available separately)
- ✓ Local (Touchscreen) or Remote (USB)

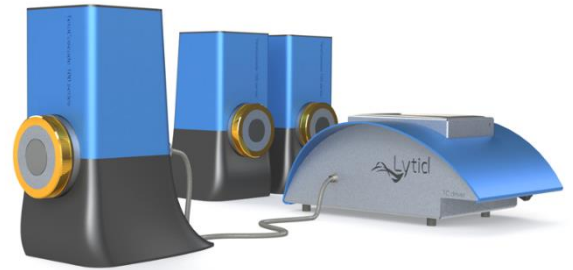
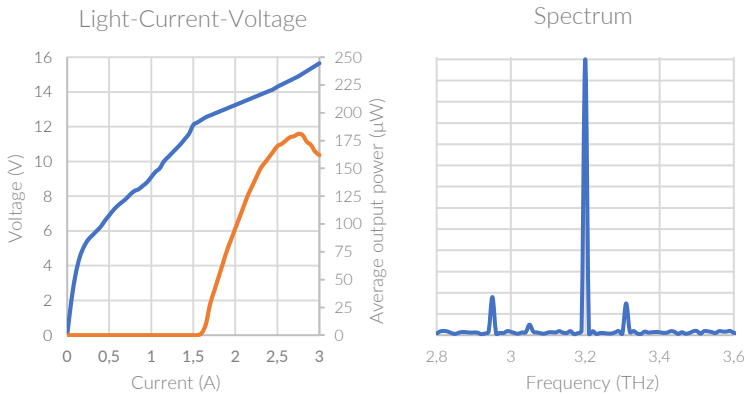
#### Connections:

- ✓ Vacuum connector ¼ inches
- ✓ 4 pins power connector to TC Driver
- ✓ Dewar Nitrogen filling via opening on the top (compatible with a continuous flow system)

#### Mechanical:

- ✓ Magnets for quick setup on optical table
- ✓ M6 screws for permanent setup

Typical value for TC100 with a 3.2THz chip



TC 100 with TC Driver

#### Features:

- More than hundred microwatts
- High quality beam shape
- Integrated Si lens with AR coating centered at the chosen frequency
- Easy configuration and fully programmable locally or remotely via a computer (with TC Driver)

#### Applications:

- High definition raster scan imaging
- Detector characterization in the THz range
- Power calibration in the THz Range

Specifications	TC100
<b>Optical data</b>	
Frequency range	From 2 to 5 THz
Wavelength	From 150 to 60µm
Average output power	> 0.1mW
Spectrum	Single or multi-mode emission
Output beam	Si HRFZ lens
Beam shape	20° FWHM
<b>Functional data</b>	
Vacuum autonomy	3 months
Cooling system	Nitrogen
<b>Dimension and weight</b>	
Height	220mm
Width	120mm
Length	180mm
Weight	2,5 Kg
<b>Options</b>	
TC Driver	✓
Vacuum turbo pump	✓