

# Tunable Coherent Terahertz Light Source



This system utilizes UTC-PD as a Terahertz mixer, and  $\lambda$ -Master 1580 as a mixing light source.

UTC-PD (Uni-Travelling Carrier Photo Diode) developed by NTT-EL enables high-efficiency generation of THz wave.

ASE free tunable diode laser, developed by SQL realizes low-noise THz wave and wide and rapid tuning with a high resolution.

## High-Power by UTC-PD

- Max. 10  $\mu$ W

## Wide Band Freq. Tuning

- 0.3 ~ 4.5 THz

## Rapid, High Res. Tuning

- Max 4 THz/sec Sweep
- Digital Res. : 3 MHz

## High Spectral Purity

- Dynamic Range: > 50dB

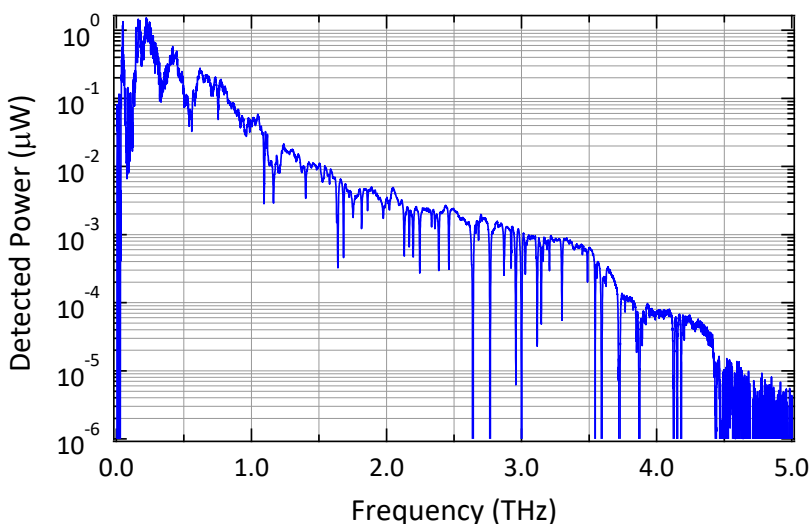
## Narrow Linewidth

- 100 kHz (10  $\mu$ sec )

## Zero Freq. Calibration

## Freq. Calib. by Etalon

Frequency Dependence of Emittred Terahertz Power



Expanded Chart of Water-Vapor Lines

