

TeraKit®

The flexible solution for THz spectroscopy

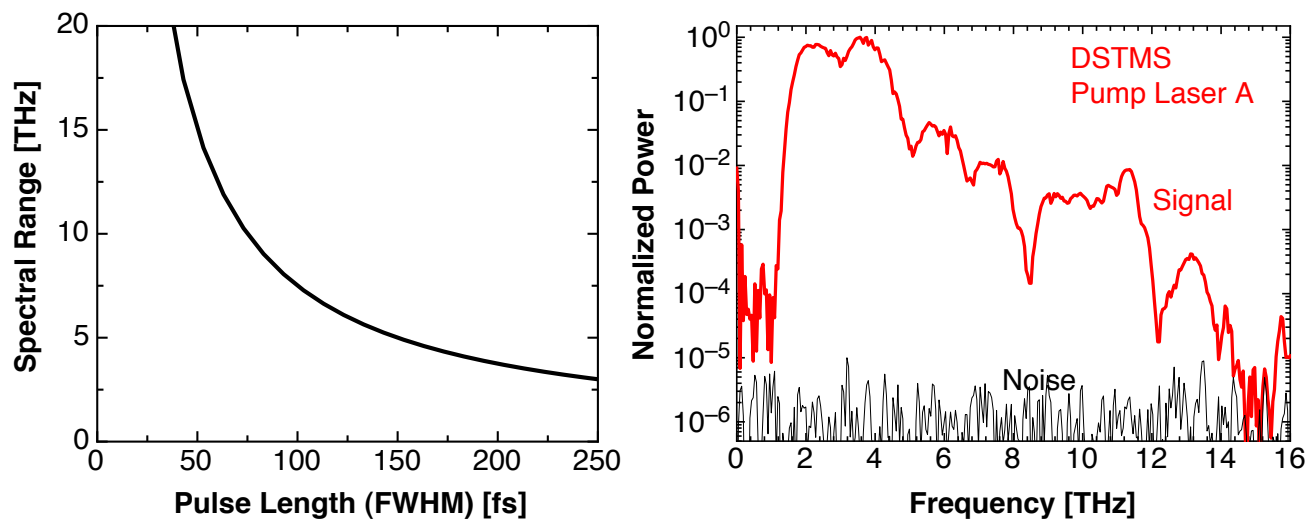
The **TeraKit®** provides a flexible solution for laboratory THz spectroscopy. It is based on organic crystals, to allow access to terahertz frequencies not available with conventional antennas. The **TeraKit®** includes all optical, mechanical and electronic components for the generation and detection of THz waves such as delay line, terahertz generator, terahertz detector, optics, electronics, dedicated software and laptop. It can be used with any femtosecond laser source at telecom wavelengths.



TeraKit® optical board (38 cm x 38 cm)

| TeraKit® Specifications | |
|---|-----------------------------------|
| THz generator / detector | Organic crystal |
| Spectral range | 1–14 THz (with ~50 fs pump laser) |
| Best phase matchable wavelength | 1300–1600 nm |
| Requirements | |
| <i>External femtosecond laser source</i> | |
| Options | |
| <ul style="list-style-type: none"> ◆ THz imaging with a scanning range of 50x50 mm² or 100x100 mm² ◆ TeraKit® including pump laser source A or B (see next page) | |

Terahertz spectral bandwidth as a function of the pump pulse length and frequency domain spectrum measured in dry air with the **TeraKit[®]** using DSTMS as terahertz generator and detector and pump laser A:



| Pump source | A | B |
|---------------------|-------------|---------------|
| Spectral range | 1–14 THz | 1–10 THz |
| Dynamic range | > 50 dB | > 70 dB |
| Scan range | up to 60 ps | up to 60 ps |
| Pulse length | < 50 fs | < 80 fs |
| Total average power | > 120 mW | > 350 mW |
| Central wavelength | 1565 nm | 1565 nm |
| Repetition rate | 100 MHz | 40 MHz/80 MHz |

Other spectral ranges are available upon request.

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