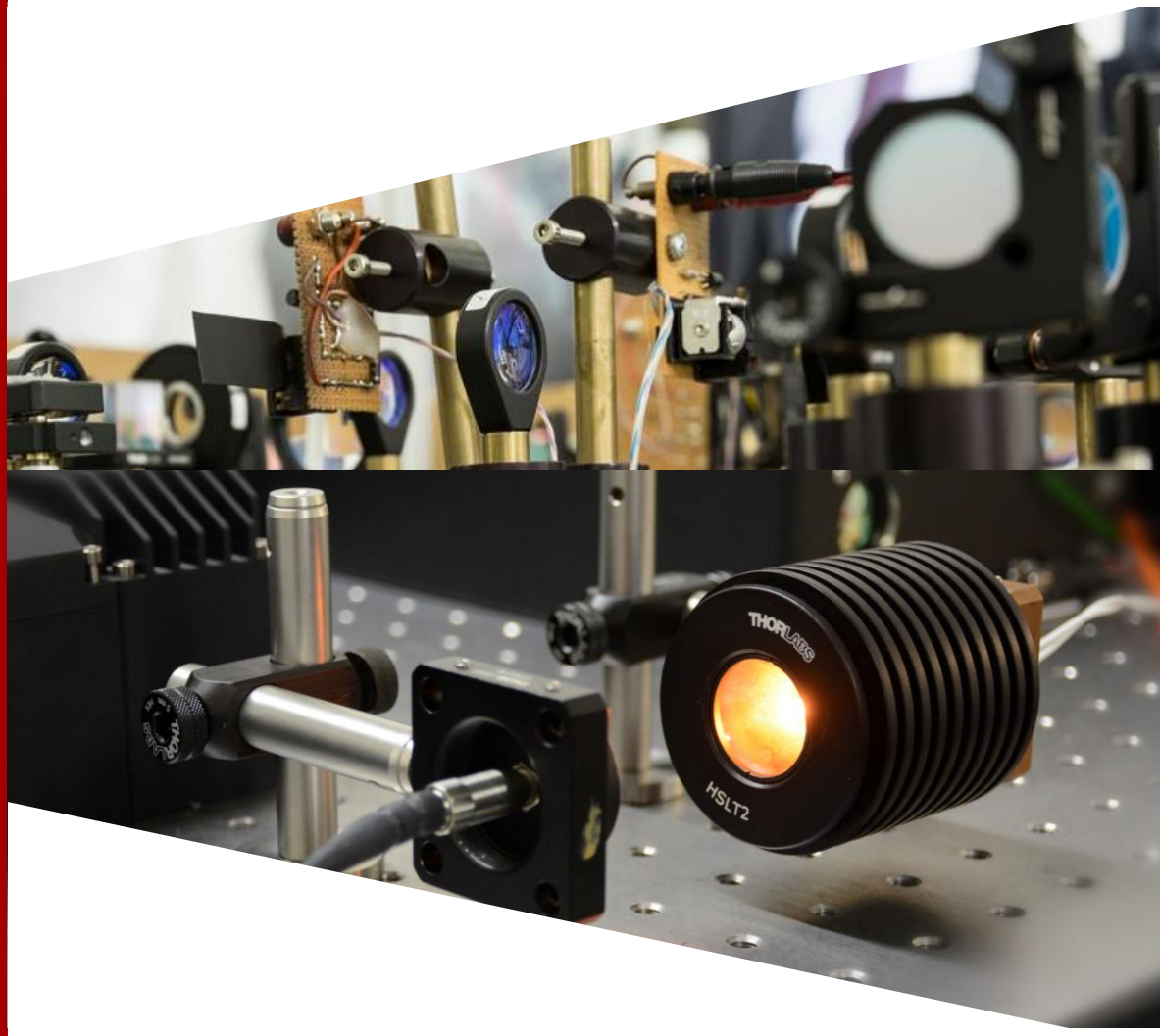
NLIR | Mid-Infrared Sensors



CHARACTERIZATION OF INFRARED LIGHT SOURCES

NLIR | Mid-Infrared Sensors

Don't let conventional spectrometers slow you down.

Upgrade to a fast and sensitive infrared spectrometer and start achieving accurate and efficient results in no time.

Contact us today to learn more about our cutting-edge technology and easy-to-use optical interfaces.

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NLIR | Mid-Infrared Sensors

FAST AND SENSITIVE SPECTROSCOPY

Our infrared spectrometer is the perfect tool for inspecting the emission spectra of various infrared light source, for example lasers, LEDs, or warm objects. Unlike conventional FTIR spectrometers that can take too long to provide accurate results, our fast and sensitive infrared spectrometer can deliver useful data in just a few milliseconds. Together with a bandwidth of 2.0 – 5.0 µm and a resolution of 6 cm^{-1}, our spectrometer boasts a maximum full-spectrum readout rate of 400 Hz, making it a reliable and efficient solution for light source characterization.

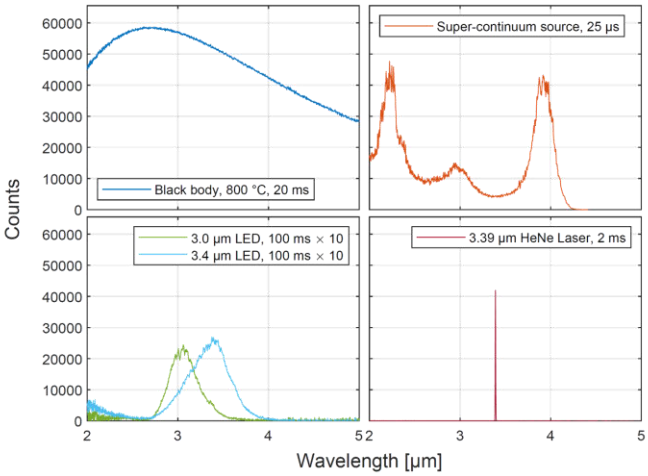
LIGHT SOURCE MEASUREMENTS

Capture the full picture of your light sources or warm objects quickly and easily with our infrared spectrometer. By simply attaching a light collimator to the input of an infrared fiber and connecting it to the spectrometer, you can measure the emission spectrum of any light source in no time.

Schematic of an infrared light source and a fiber-coupled NLIR infrared spectrometer. A collimation tube is used to focus light from the light source into the fiber. The light source here is a hot blackbody-like filament, but it could be any infrared light source or hot object.

Our technology allows for quick and accurate measurement of a variety of light sources, as shown in the graph below, including an 800 °C blackbody with emissivity of >0.99 (top left), a single pulse of a mid-infrared supercontinuum light source (top right), two different mid-infrared LEDs (bottom left), and a He-Ne laser (bottom right).

In these example measurements, the acquisition time is so short that the entire spectra are updated with a high rate on the screen, enabling real-time adjustments to be made for optimal measurements.



Raw data (no smoothing, post-processing, or pixel binning) showing the emission spectra of four different infrared light source: (top left) 800 °C blackbody, (top right) mid-infrared supercontinuum light source, (bottom left) two different LEDs, (bottom right) He-Ne laser. The legends show the exposure time used to capture the data.