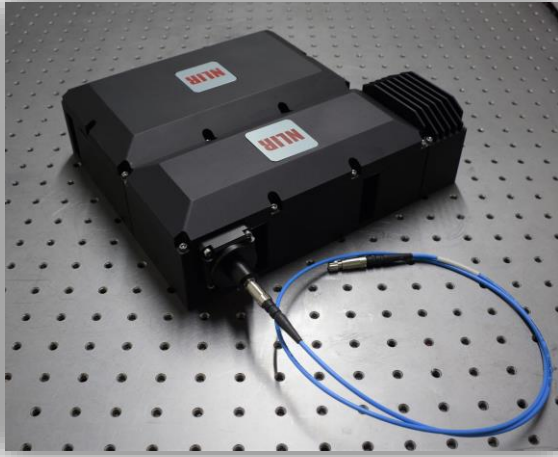


NLIR

Nonlinear Infrared Sensors

Mid-Infrared Spectrometers

Fast – Sensitive – Rugged



The NLIR mid-infrared Fibre Spectrometer brings a novel approach to infrared light sensing that has unprecedented combinations of sensitivity, speed, resolution and measurement versatility as its foremost advantages.

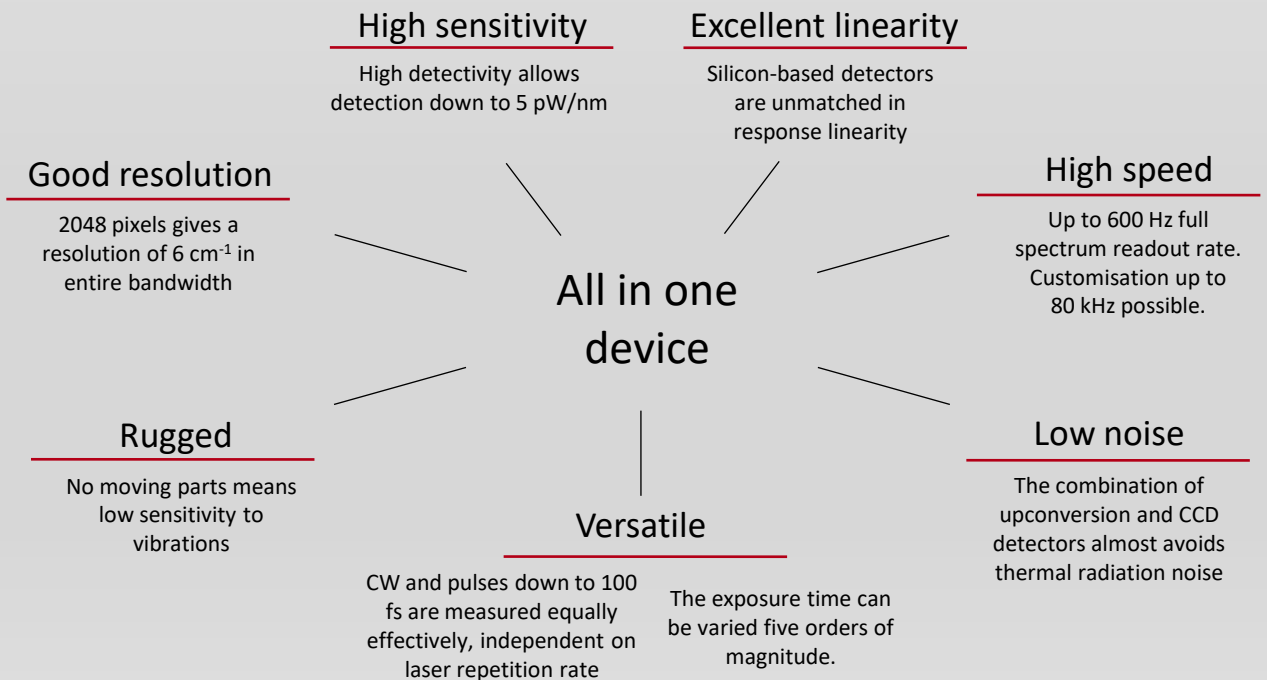
Basic specifications

Bandwidth	2.0 μm – 5.0 μm
Resolution	6 cm^{-1}
Exposure time	11 μs – 1 s
Max. spectrum readout rate	600 Hz
Optical input	200 μm InF ₃ multimode fibre

See the following page for full specifications

NLIR Mid-Infrared Fibre Spectrometer

– a new paradigm in mid-infrared light detection



NLIR Mid-Infrared Fibre Spectrometer

– a new paradigm in mid-infrared light detection

Mid-infrared (MIR) spectroscopy is used in both industry and research for non-invasive characterisation of gasses, liquids and solids as well as characterisation of light sources. The NLIR MIR Fibre Spectrometer is based on a novel measurement scheme that upconverts the MIR light to near-visible light. Silicon-based near-visible light detectors, for example CCDs, are far superior to MIR light detectors in terms of detectivity, speed and noise. The NLIR upconversion technology therefore brings these attractive features, and the advantages that follow, to the MIR regime.

NLIR MIR Fibre Spectrometer	
Bandwidth	2.0 μm – 5.0 μm
Resolution	6 cm^{-1}
Exposure time	11 μs – 1 s
Sensitivity at 3.7 μm^{a}	34.2 Counts/(ms · (nW/nm))
Minimum input power at 3.7 μm at 1 s	5 pW/nm
Saturation input power at 3.7 μm at 11 μs	0.1 mW/nm
Bit depth	16 bit
Maximum full spectrum readout rate	600 Hz
Optical input ^b	200 μm InF ₃ multimode fibre
Connection	Ethernet or USB
Physical dimensions (h × l × w)	90 mm × 275 mm × 175 mm

^a3.7 μm represents an average value of the sensitivity; ^bInput fibre can be dismantled to use free-space input but the spectral response might be inaccurate