



Electro Optical Components, Inc.

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Imaging Transmission Spectrograph IST-NIR 1222

Imaging transmission spectrographs by inno-spec are developed for challenging applications in hyperspectral imaging. They feature a robust design and in combination with a NIR camera built up a spectral imaging system. Our standard NIR devices are optimized for the use with our InGaAs cameras, but adaption to other cameras is possible as well. An essential intension in the design of the spectrographs is a homogenous distribution of light over the whole spatial area.

Spectrograph	
spectral range	1200 – 2200 nm
dispersion	140 nm/mm
spectral resolution	15 nm
image size	7.68 (spectral) x 14 (spatial) mm
spatial resolution*	rms spot radius < 35 µm
smile	< 90 µm
keystone	< 14 µm
numerical aperture	F/2.6
slit width, default	80µm (others on request)
efficiency	> 50% independent of polarization
Mechanics	
dimensions l x w x h	180 x 50 x 66 mm
housing	anodised aluminium
weight	1.5 kg
lens mount	standard C-mount
Operating Conditions	
temperature (operating)	-5 °C - +40 °C
temperature (transport)	-10°C - +50°C

Like most inno-spec spectrographs the IST-NIR 1222 is based on transmission optical design with AR-coated lenses, a VPH grating as dispersive element and without moving parts.

By replacing the standard input slit and lens with a multichannel fiber input, the spectrograph can be used for a multichannel-spectrometer.

* depending on the fore optics used and the sensor size

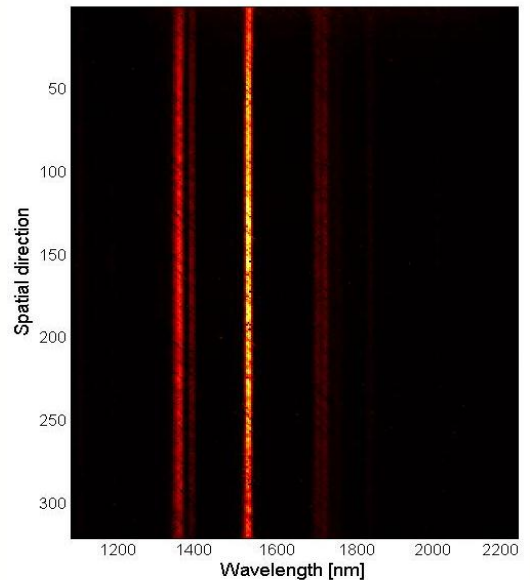




Optical Quality

Our goals are:

- High light throughput due to high diffraction efficiency of transmission VPH grating, and AR-coated optics
- Polarization free optical design



Customized Solutions

Transmission spectrographs are available for two standard wavelength ranges in the NIR (950 – 1700 nm and 1200 – 2200 nm).

If the application requires dedicated optics, wavelength ranges, customization can be done without large NRE costs.

inno-spec also offers compatible cameras, line lighting, accessories and spectral imaging systems for the NIR, VNIR, VIS or UV wavelength range.

Accessories

- cameras
- DC-Halogen light sources in modular sizes
- fiber optic adapters to use the Spectral Imaging System NIR as a multichannel-spectrometer.
- Mounting accessories
- Fore optics (8mm/ 12.5mm/ 16mm/ 25mm/ 35mm/ 50mm)