



Electro Optical Components, Inc.

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Imaging Transmission Spectrograph IST-VNIR 8511

Imaging transmission spectrographs by inno-spec are developed for challenging applications in hyperspectral imaging. They feature a robust design and in combination with a camera built up a spectral imaging system. Our VNIR spectrograph is optimized for the use with a CMOS camera having an enhanced response in the NIR wavelength range, 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	850 – 1100 nm
dispersion	29 nm/mm
spectral resolution	2.8 nm (with 80 µm slit)
image size	8.65 (spectral) x 10.5 (spatial) mm
spatial resolution*	rms spot radius < 30 µm
smile	< 14 µm
keystone	< 28 µm
numerical aperture	F/2.9
slit width, default	80 µm (others on request)
efficiency	> 50% independent of polarization
Mechanics	
dimensions l x w x h	189 x 50 x 88 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-VNIR 8511 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 fibre input, the spectrograph can be used for a multichannel-spectrometer.

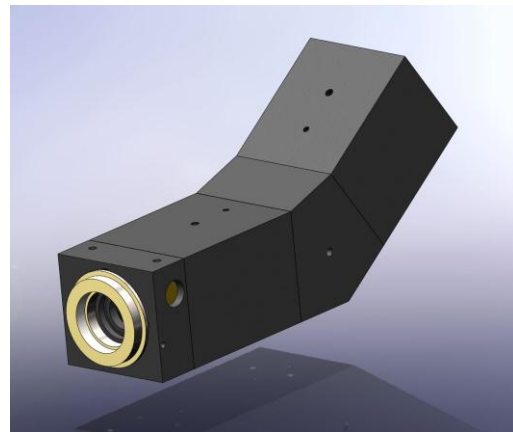
* depending on the fore optics used and the sensor size



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

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, VIS or UV wavelength range.

Accessories

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