

Customized compact spectrometers

General

SILIOS offers series of compact mini-spectrometers which cover a wide range of spectral responses and are tailored to client's specific applications. The customer choose the number of wavelengths to be measured and their values. Complete mini-spectrometers modules are available as well as integrated optical heads only.

Applications

From UV to FIR (200 nm to more than 8 μ m) for applications such as : fluorescence measurement • light source testing (LEDs) • industrial color measurement • tooth decay analysis • analysis of chemical components in agri-food industry • semiconductor inspection • DNA analysis • process control instrumentation • water content measurement • film thickness measurement • ...

As they are miniaturized, low cost, reliable, harsh environment compatible, configured to be specific to a targeted application, the **SILIOS** spectrometers are ideally used for on-line controls and measurements.

Specifications

Measured Spectrum :

- Spectrum type : discrete
 - Number and choice of wavelengths : on demand ⁽¹⁾
 - Spectral resolution : down to 5 nm (FWHM)
- ⁽¹⁾ Typical : 2, 4, 8, 16, 32, 64, ... (other figures also possible).

Detector types:

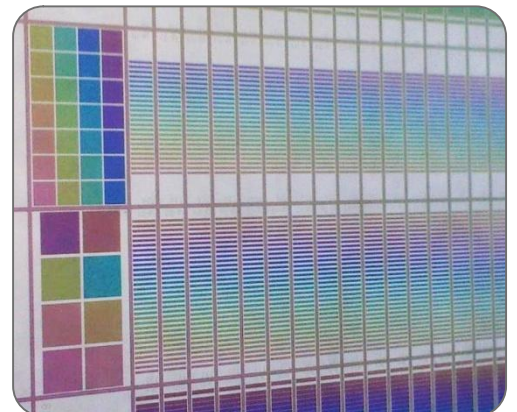
- CCD/CMOS detectors for VIS and NIR (<1 μ m) applications
- Ge or AsGa detectors for NIR (>1 μ m) to MIR applications
- Microbolometers for FIR (> 8 microns) applications

Advantages:

- Fully customized
- Compact for ease of use and integration
- Usable in harsh environment
- Cost effective



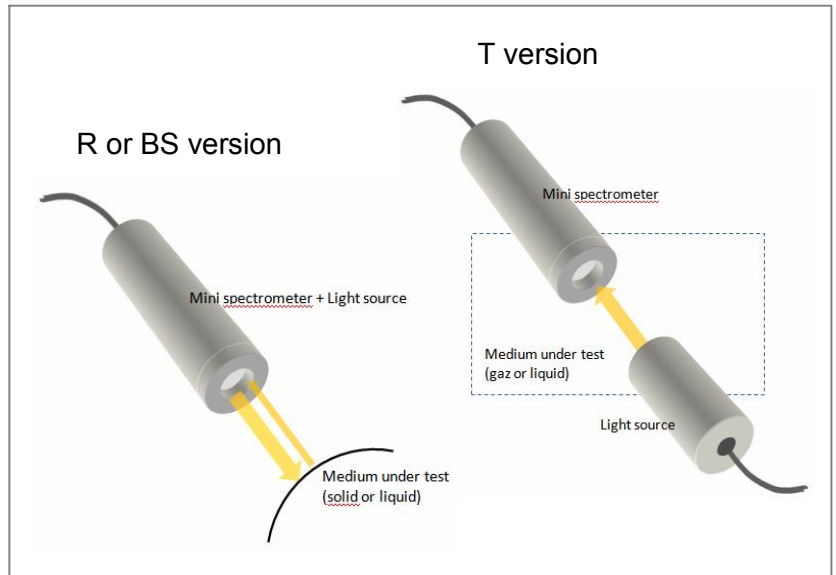
Packaged spectrometer module



SILIOS optical chips (wafer)

Measurement modes:

- Transmission (T version)
- Reflection mode (R version)
- Back-scattering mode (BS version)



Scalable Furniture:

SILIOS provides OEM customer with different possible levels of integration:

- Optical chip
- Optical chip + Imager
- Optical chip + Imager + electronic board
- Full spectrometer

