

*Brings microscope functionality to your spectrometer*

## MicOS Microscope Optical Spectrometer

Using a standard microscope for luminescence characterization often means inefficient fiber-optic coupling to the spectrometer, and difficult access for many sample configurations, such as side-emitting devices, or upright cryostats. Nor do standard microscopes offer flexibility for coupling multiple lasers for photoluminescence excitation.



HORIBA Scientific's MicOS merges microscopy and spectroscopy, to provide optimal coupling from sample all the way to the detector. Down-looking or side-looking configurations for side-emitting devices or upright cryostats give you flexible sample access. An optional, fully automated stage for mapping and sample-positioning is available. The MicOS offers a flexible platform for the use of multiple lasers for sample excitation. The system includes a vision camera so you always see what you are measuring.

The MicOS is the most cost-effective and flexible microspectrometer solution!

### Specifications\*

Spectrometers		iHR320		iHR550
Spectral range <sup>1</sup>		200 nm to 1600 nm		
Spectral resolution <sup>2</sup>		0.18 nm		0.1 nm
Detector	Type	CCD 1024 × 256 OE <sup>3</sup>	IGA 512 × 25	Single-channel
	Range	200–1050 nm	800–1600 nm	190–1600 nm <sup>4</sup>
Excitation laser <sup>5</sup>		532 nm	633 nm	785 nm
Microscope Objective	Magnification	10×	50×	100×
	Spot size	100 μm	<20 μm	<10 μm
Sample stage		xyz (manual or motorized)		

<sup>1</sup>Depends on choice of objective, filters, and detectors.

<sup>2</sup>For 1200 gr/mm grating and open-electrode CCD

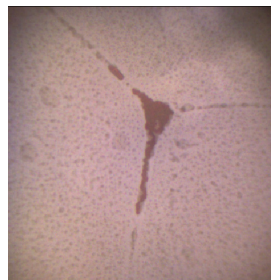
<sup>3</sup>BIUV, BIVS, and BIDD formats available for specific quantum-efficiency requirements.

<sup>4</sup>Needs two detectors to cover entire range.

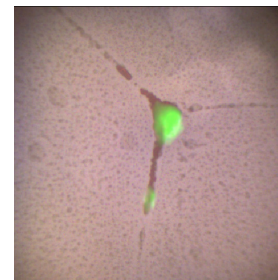
<sup>5</sup>Other options are available upon request.

\*Specifications are subject to change without notice.

### Photoluminescence

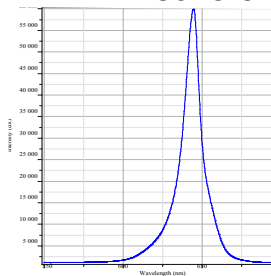


Aggregate of fluorescent beads

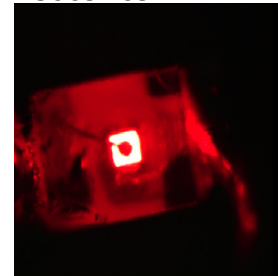


Fluorescence map overlay at 700 nm, following excitation at 633 nm

### Electroluminescence



Emission of red LED



Red LED

# HORIBA

## Scientific

**Spectrometer**  
iHR320  
iHR550

**Gratings**  
Grating 1  
Grating 2  
Grating 3

**Detectors**  
Synapse CCD (250–1050 nm)  
IGA array (800–1600 nm)  
Syncerity CCD (affordability)  
Single-channel detector

- ELEMENTAL ANALYSIS
- FLUORESCENCE
- GRATINGS & OEM SPECTROMETERS
- OPTICAL COMPONENTS**
- PARTICLE CHARACTERIZATION
- RAMAN
- SPECTROSCOPIC ELLIPSPOMETRY
- SPR IMAGING



**Lasers**  
532 nm  
633 nm  
785 nm  
Custom

**Side & down objectives**  
10×  
20×  
50×  
Custom

**Optional mapping**  
Mapping stage  
Focusing stage  
Mounting platform

### Feature

### Microspectroscopy Benefits

Fully integrated system	Optimum coupling from the sample all the way to the detector
Down-looking and side-looking configurations	Flexibility to measure luminescence from side-emitting devices and samples in upright cryostats
Multiple lasers	Can accommodate multiple fiber-coupled lasers for excitation at different wavelengths
Optional automated stage	Allows mapping functions and accurate sample-positioning
Vision camera included	See exactly what you are measuring
LabSpec Software	Complete control of an entire spectrograph system with full analysis capabilities
Wide spectral range	Collect emission spectra from 200 nm up to 1600 nm

[info.sci@horiba.com](mailto:info.sci@horiba.com)  
[www.microspectroscopy.com](http://www.microspectroscopy.com)

**HORIBA**  
Scientific

**USA:** +1 732 494 8660  
**UK:** +44 (0)20 8204 8142  
**China:** +86 (0)21 6289 6060

**France:** +33 (0)1 69 74 72 00  
**Italy:** +39 2 5760 3050  
**Brazil:** +55 (0)11 5545 1500

**Germany:** +49 (0)89 4623 17-0  
**Japan:** +81 (0)3 6206 4717  
**Other:** +33 (0)69 74 72 00



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