

OLIS CPL SOLO

Exactly what a CPL spectrometer needs to be

The CPL Solo is the only commercial spectrometer designed on first principle for circularly polarized luminescence.

It's perfect on every front.

- ✓ **Maximum Excitation**
using brilliant, stable filtered LEDs
- ✓ **Collects Polarization of Fluorescence**
and optionally phosphorescence lifetime
- ✓ **Scanning Emission**
using a single grating monochromator
- ✓ **Costs 50% Less than Models with CD Specific Hardware**
No xenon arc lamp, power supply, large monochromators, or lock-in amplifier
- ✓ **Highest Sensitivity Detection**
with photon counting
- ✓ **50-80% Smaller than the Size of Alternative Commercial Models**
Before computer, measures only 55 cm x 55cm
- ✓ **Digital Acquisition of True IL and IR**
correct calculation and presentation of GLUM

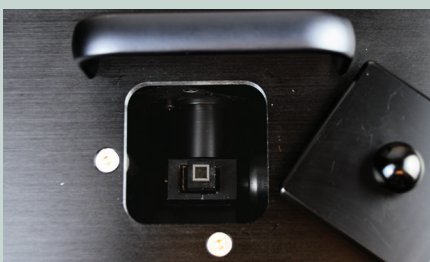
Maximum Excitation

The full intensity of a wavelength specific LED is millimeters from the sample, providing greater intensity than anything other than a laser. A filter is added to narrow the bandpass of certain wavelengths. OLIS electronics hold the intensity stable to within ± 0.001 volt/24 hour cycle.



LED as excitation source

- Wavelength specific LED with exceedingly high intensity and stability, 400-1100 nm standard.
 - > Ultraviolet wavelengths (240-390 nm) slightly higher price.
- Most are filtered to reduce the bandwidth of the produced color to ± 5 nm.
- The filter and LED are housed in a metal tube casing, which is designed for easy interchange. Changing from one tube (wavelength A) to another (wavelength B) requires no tools, no alignment, and takes a few moments.
- The LED operates using OLIS electronics and computer control.



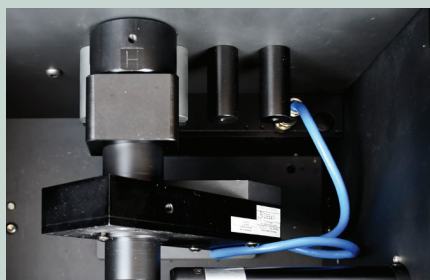
Sample Holder Choices

- Ambient 1 cm² cuvette holder, included in system price.
- Peltier 1 cm² cuvette holder.
- Fixed angle thin film holder.
- Variable angle thin film holder, manual or computerized.
- Other, client specified.



Photoelastic Modulator (PEM)

- Modules the left and right circularly polarized emission 50,000 times per second.
- Timing of data acquisition by OLIS software is synchronized to the "F-signal" from the PEM, so that every datum's exact state of polarization is known, eliminating the need for analog lock-in amplifier and pre-measurement settings.



Polarizer within 2" Holder

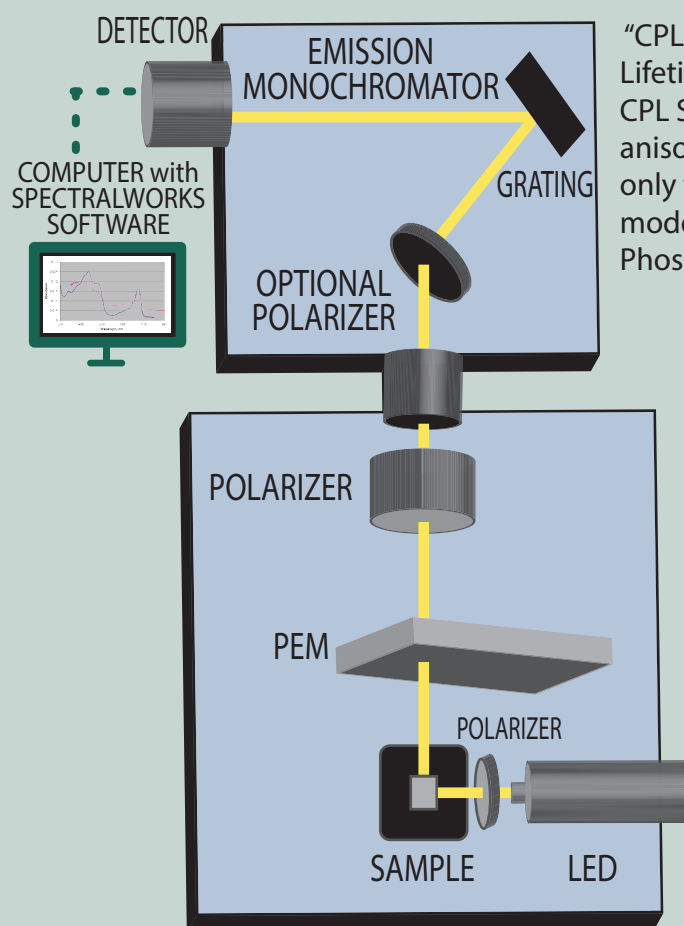
- Mounting ledges before the sample to polarize the measurement light and after the sample to polarize the emitted light.
- Lift and move without tools.
- Aligns with holding notch for perfect positioning.

Scanning Emission & Highest Sensitivity Detection

Default Vis/NIR or higher price UV/Vis single grating monochromator is mounted for fast and fail-safe interchange. The detector travels with the monochromator.

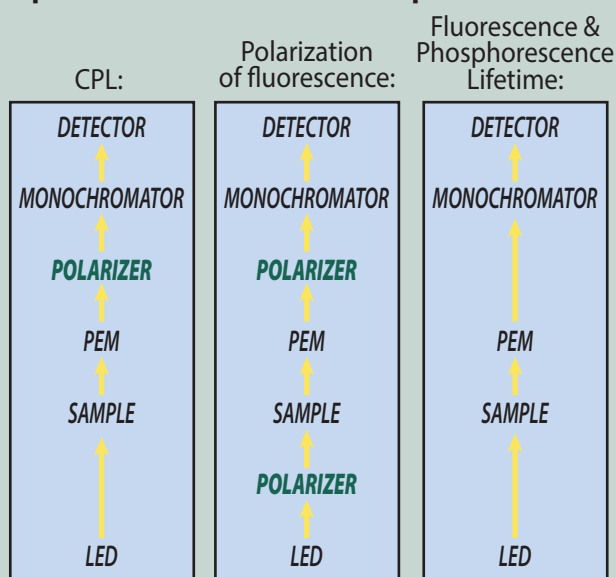


CPL, Polarization of Fluorescence, and Phosphorescence Lifetime Fluorimeter

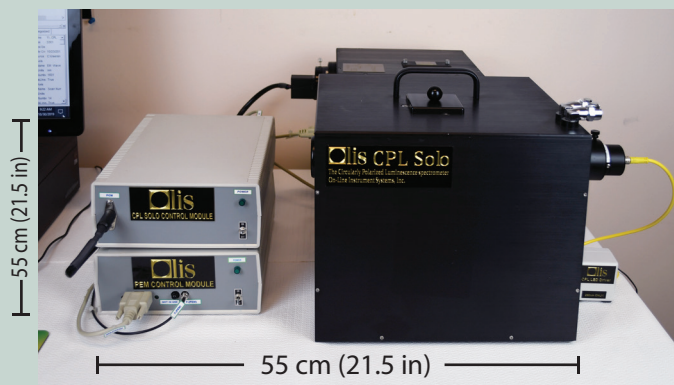


"CPL, Polarization of Fluorescence, and Phosphorescence Lifetime Fluorimeter" was a bit long of a name! But, the CPL Solo offers polarization of fluorescence (and thus anisotropy), as well as un-polarized fluorescence, with only fast and fail-safe positioning of polarizers. With a modest enhancement, the CPL Solo becomes a Phosphorescence Lifetime spectrometer, too.

Options for the location of the polarizer:



SPECIFICATIONS



Call us in Athens, Georgia, USA
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Wavelength Ranges	
Excitation	LED specific
Fluorescence emission	230-870 nm. 700-1700 nm with optional NIR enhancement
Polarization of fluorescence	230-870 nm. 700-1700 nm with optional NIR enhancement
Circularly Polarized Luminescence	230-870 nm. 700-1700 nm with optional NIR enhancement
Spectral Resolution	0.1 nm to 20 nm
Optics	Single grating emission
monochromator by OLIS	
Detector	Photon counting detector for UV/Vis emission by Hamamatsu. Optional InGaAs(s) for NIR
Scanning Speed	up to 40 nm/sec
Wavelength Accuracy	better than 0.1 nm
Dynamic Range	0.001 to 3 AU/cm
Linearity	over at least six orders of magnitude
Spectral Bandwidth	down to 0.3 nm
Calibration	Factory set and permanent
Lock-in amplifier	None. No decoupling or amplification of polarization signal is required. No user settings for sensitivity, time constant, or amplitude.

