www.olisclarity/cpl-solo/

Advantages of the CPL Solo

Value provided to researchers	Key differentiators over competitors
Affordable at under US$100K	Alternatives are $150K to $250K
Small! Entire system – spectrometer, computer & keyboard, electronic box – requires less than a meter of bench space.	Two to three times the footprint of the Solo
Highest sensitivity detection Uses the highest sensitivity gated photon counting PMT extent.	Analog PMT to A/D converter and lock-in amplifier
Brilliantly intense, yet highest stability, excitation source. Wavelength-specific filtered or unfiltered LED(s) positioned millimeters from the sample. Nearly immeasurably low variation in intensity over tens of hours.	Broadband Xe arc lamp through double monochromator **Complex, large, and far more expensive than LEDs**
The perfectly correct answer Direct collection of raw I_L and I_R signals. Direct calculation of CPL by definition: CPL = I_L - I_R	Indirect collection of de-coupled intensity signals and calculation of CPL using these decoupled intensities and a calibration value. The answer is correct only if numerous variables are perfect; **no reversible data handling is possible and no separation of I_L or I_R for examination of each.**

Correct units Presentation of answer as g_{lum} , the luminescence dissymmetry ratio (or factor): $g_{lum} = 2(I_L - I_R / I_L + I_R)$	Answer plotted as mdegs or counts
Successful with smallest to largest signal strengths. Freedom to select integration times for data collection speed appropriate to samples of signal strength from < 0.001 - 2 $_{GLUM}$	unknown
Relentless reliability and maximum longevity. Single moving component (grating in the monochromator) presents minimal hardware to fail	Complex excitation and emission monochromators
Most digital design Minimum of electronics **(reduces price and maintenance);** utilization of **FPGA firmware** for modern instrument control and data handling	Excessive electronics, necessitated by complex (obsolete) methods (lock-in amplifier, G-factors). Obsolete on many fronts
Most modern computerization Win 10 computerization with useful & powerful 2D and 3D presentation and analysis and single click option for direct export into Excel or as CSV file for presentation, reports, and external storage.	unknown

For laboratories concerned about chirality of molecules in the excited state …

And the correct answer easily

Organic Chemists working with OLEDs and lanthanide coordination complexes **Material Chemists working with chiral nanomaterials** **Biochemists working with proteins, nucleic acids, and more**	**Correct CPL results without sophisticated demands on the technician** **Optimize from one sample type to another by choosing excitation appropriate LED.**

The CPL Solo is the highest sensitivity Circularly Polarized Luminescence spectrometer for all researchers who want exact and correct data to characterize their emissive molecules' chirality and a mature & internationally respected corporation to produce and support the system.

- The perfect answer easily
- Far more affordable than any alternative
- Far smaller than any alternative
- Fail-safe and upgradeable
- Easily upgradable to support **Phosphorescence Lifetime** so that one knows whether he is collecting circularly polarized fluorescence or circularly polarized phosphorescence
- Easy movement among **sample holders:** Peltier (1 & 4 cell options), variable angle thin film holder, 1.4 Tesla permanent magnet, and more.
- Certain to be a proud stopping point on the tour of your laboratory.

On-Line Instrument Systems, Inc. (OLIS) was founded by the author of the 1974 **Analytical Chemistry** paper, *"Recording polarization of fluorescence spectrometer. Unique application of piezoelectric birefringence modulation."*

In the nearly 50 years since, Dr. Richard J. De Sa and his staff have pioneered the most innovative and exciting advances in absorbance, fluorescence, circular dichroism, and circularly polarized luminescence spectrophotometry systems.

Today's CPL Solo is the culmination of decades of achieving one brilliant breakthrough after the other. A less researcher-centric company might charge twice the amount for this world-class product.

We aspire to make CPL available to all who need it.