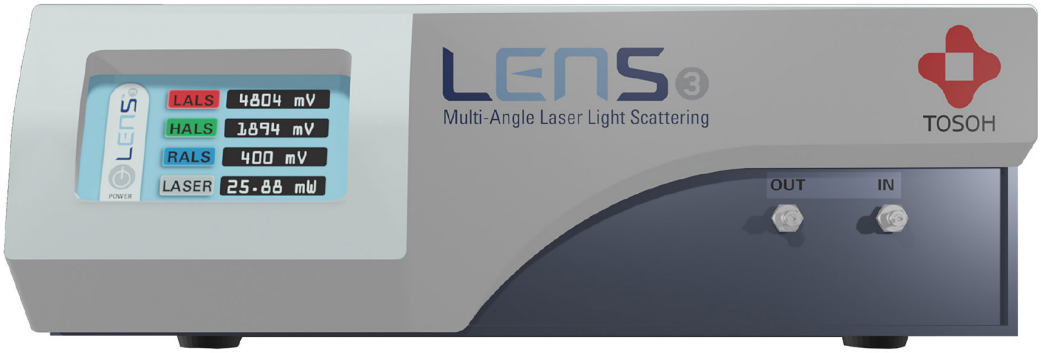
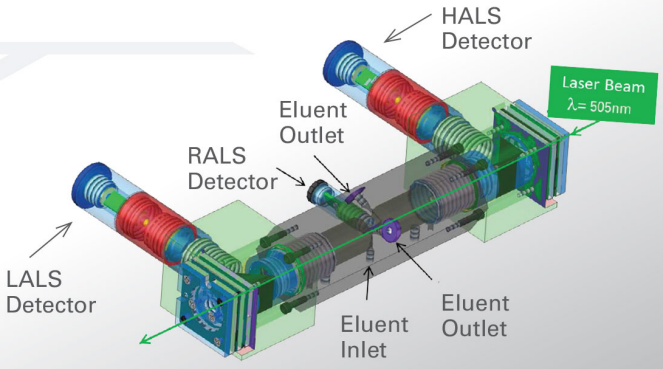
TOSOH

LENS® 3

Multi-Angle Laser Light Scattering



A Revolutionary Technology for Macromolecular Characterization



HIGHLIGHTS

High Sensitivity	➨ Unique patent pending optics design ➨ Green light source: ~2.7× higher scattering intensity
Extended R_g Measurements	➨ A new calculation method using the Angular Dissymmetry Plot ➨ Patent pending revolutionary normalization procedure ➨ Better signal-to-noise ratio with improved electronics and optics
SEC/HPLC/UHPLC Compatability	➨ High acquisition rate (up to 50 Hz) ➨ Allows usage of semi-micro SEC/HPLC columns and narrow-bore UHPLC columns
Powerful and Intuitive Software	➨ Simultaneous multi-method execution and analysis ➨ Simple calibration procedures ➨ MW and R_g in a few clicks ➨ dn/dc and UV extinction coefficient measurement

Specifications

Number of measurement angles	3
Position of the measurement angles	LALS (10°) RALS (90°) HALS (170°)
Cell geometry	proprietary conical flow path (single inlet, dual outlets)
Laser source type	diode
Laser power	30 mW
Laser wavelength	505 nm
Laser temperature control	yes
Wetted material	teflon, PEEK, glass, stainless steel
Maximum flow rate	2 mL/min
Inlet position	front or side
Baseline noise (in THF @ 1 mL/min)	< 1 mV
Baseline drift (in THF @ 1 mL/min)	< 1 mV / 30 min
MW range	< 200 to 10^7 Da
R_g range	< 2 nm to > 50 nm (in progress)
Acquisition rate	< 1 to 50 Hz, user selectable
A/D board channels / resolution	8 channels / 24 bits
Dynamic range	+/- 10 V
Analog inputs	RI, UV and start signal
Connection to PC	ethernet
Dimensions	36.5 (W) × 48.5 (D) × 13 (H) cm = 1.4" × 1.9" × 0.5"
Weight	16 kg = 35 lbs
Intellectual property	PCT/US19/12090: Light Scattering Detectors and Sample Cells for the Same PCT/US19/12095: Light Scattering Detectors and Methods for the Same

Features and Benefits:

MW determination options:

- Direct measurement using 10°
- Direct measurement using 90°
- No longer necessary are Zimm plot extrapolations using multi-angle measurement

R_g determination options:

- A patent pending method using a novel Angular Dissymmetry Plot (no concentration information necessary)
- Replaces the historic assumption of total isotropic scattering for lower molecular size

SECview software Features:

- Simultaneous multi-method execution and analysis
- Multi-point *dn/dc* and UV extinction coefficient determination
- Automatic peak detection for conventional column calibration method
- Multi-peak selection and "independent" data processing
- Adaptable multiple-injection overlay platform
- Advanced peak band broadening and inter-detector volume correction algorithms
- Direct access to the raw data signals while offering powerful de-spiking and smoothing options
- Access to data point cursors on chromatograms and derived graphs
- Easy export of raw data to ASCII files and graph/chromatogram to picture file