

Flow Imaging Microscopy with Light Obscuration

OVERVIEW

Yokogawa Fluid Imaging Technologies announces the release of a groundbreaking new instrument, the FlowCam + LO. By combining industry standard light obscuration technology required for USP compliance with digital images from proven flow imaging microscopy technology, the new FlowCam + LO will soon become the preferred instrument in biopharma labs worldwide.

In the FlowCam + LO, a single sample passes continuously through two flow cells. The first uses FlowCam technology to capture digital images (Fig 1), and the second uses light obscuration to provide data necessary for USP compliance (Fig 2).

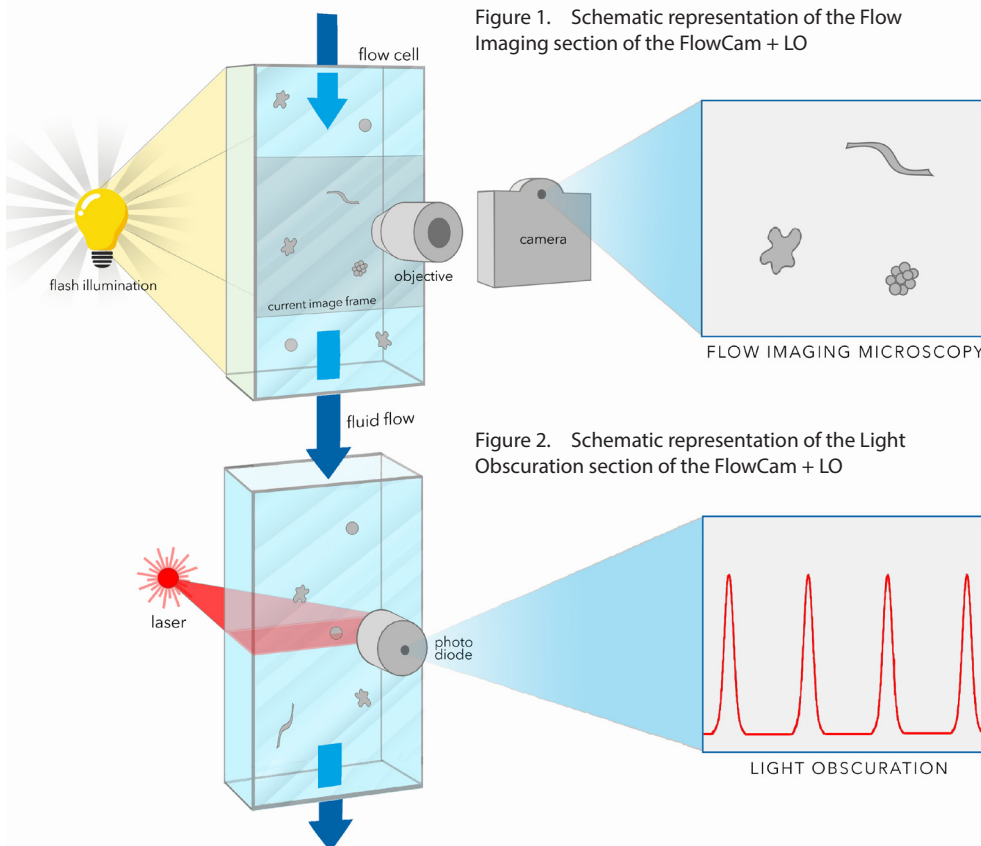


Figure 1. Schematic representation of the Flow Imaging section of the FlowCam + LO

Figure 2. Schematic representation of the Light Obscuration section of the FlowCam + LO

BENEFITS

Collect and process data with FIM and LO at the same time

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Reduce bench time by combining two particle analysis techniques in a single instrument

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Reconcile data from a single sample, and a single run with two different technologies

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Minimize required sample volume

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FlowCam + LO Specifications	
Particle Size Range	2 µm to 80 µm
Magnification	10X (~100X magnification)
Flow Cell	Flow Imaging Module: 80 µm quartz flow cell LO Module: 1 mm x 0.4 mm quartz flow cell
Minimum Sample Volume	250µL (0.250 mL)
Sample Processing Capability	0.2mL/minute
Measured Parameters	<p>Basic Shape Parameters: Area, Aspect Ratio (width/length), Area Based Diameter (ABD), Equivalent Spherical Diameter (ESD), Length, Volume (ABD-based), Volume (ESD-based), Width, 3 Biovolume Measurements</p> <p>Advanced Morphology Parameters: Area (Filled), Circle Fit, Circularity, Circularity (Hu), Compactness, Convex Perimeter, Convexity, Elongation, Fiber Curl, Fiber Straightness, Geodesic Aspect Ratio, Geodesic Length, Geodesic Thickness, Perimeter, Roughness, Symmetry</p> <p>Fluorescence Detection & Measurements: Channel 1 Area, Channel 1 Peak, Channel 1 Width, Channel 2 Area, Channel 2 Peak, Channel 2 Width, Channel 2/Channel 1 Ratio</p> <p>Gray Scale and Color Measurements: Average Blue, Average Green, Average Red, Blue/Green Ratio, Red/Blue Ratio, Red/Green Ratio, Edge Gradient, Intensity, Sigma Intensity, Sum Intensity, Transparency</p>
Flow Imaging Module Camera	High resolution (1920x1200 pixels) CMOS. Monochrome and color available.
Frame Rate	Shutters up to 100 frames per second.
LO Light Source	Solid-state laser diode, 785 nm
LO Detection Method	Light extinction, volumetric
Fluidics	Micro-syringe pump with 2.5 mL syringe
VisualSpreadsheet®	Interactive, image-based analytical software that generates 40+ particle measurements per cell. Filter, sort, and classify data based on user-defined criteria. Create libraries to automate classification for future sample analyses.

REQUEST A FREE SAMPLE ANALYSIS

Send us your sample and we will provide:

- A web-based, interactive presentation of results
- Histograms and scattergrams showing size and distribution of particles
- A Microsoft Excel spreadsheet with measurement data, including count, length, width, and ESD
- Digital images of the cells and particles

