

CytoViva Enhanced Darkfield Optical Illumination System Specifications

The patented CytoViva enhanced darkfield optical illumination system replaces the standard microscope condenser. The specialized illuminator focuses fixed-geometry, highly collimated light at oblique angles on the sample. This serves to improve signal-to-noise up to Seven (7) times over standard darkfield microscopy. This enables optimized dark field detection capability of non-fluorescing nano-scale samples.

Application Examples

- Nano-Bio Interactions
- Nano-materials Characterization
- Nano-Drug Delivery
- Pathogen and Cell Characterization

CytoViva Optical Illumination System



20nm AgNPs in Solution



Specifications

SYSTEM PERFORMANCE

Noble Metals & Metal Oxide NPs	Detection ~ 10 nm
SoftNPs (liposomes, polymers, etc.)	Detection ~ 75 nm

ILLUMINATION SYSTEM

Focal Distance	~1.5 mm
Field of View	~350 μ m - 400 μ m
Numerical Aperture	1.2–1.4 N.A.

LIGHT SOURCE

Standard Light Sources	Solarc, Halogen, Mercury Vapor
Power Supply	100-240Vac, 50/60 Hz, 1.6A max
Power	Variable Depending on Source Illumination
Light Guide Type	Liquid
Outside Diameter of LLG	5 mm
Inside Diameter of LLG	3 mm

DIMENSIONS

Height(Max)	98 mm
Minimum Mounting Clearance	51 mm
Dovetail Angle	30° Slope
Dovetail Minimum Diameter	41 mm
Barrel Length	110 mm
Weight	0.43kg (15 oz.)

REQUIREMENT

Immersion Oil	Type A (nd> 1.515) Cargille Brand
Sample Prep	Cover slip - 0.17 mm Thickness
Sample Prep	Slides - 1 x 3 mm Glass Slide

MICROSCOPE COMPATIBILITY

Upright Research Microscopes	C-and O-shaped, 3-point Condenser Mounts (Diameter and Clearance Requirements of CytoViva Optical Illumination System)
Inverted Research Microscopes	Requires Optional Inverted Adapter

OBJECTIVE COMPATIBILITY

Mid Range Objective	10X Air
Mid Range Objective	20X Air
Mid Range Objective	40X Air or Water (N.A.= 0.7 Iris Optional)
Mid Range Objective	40X Long Working Distance
High Range Objective	60X Oil with Iris (N.A.= ~1.4)
High Range Objective	100X Oil with Iris (N.A.= ~1.4)

WARRANTY

Warranty	One (1) year from date of purchase
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