

# 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.

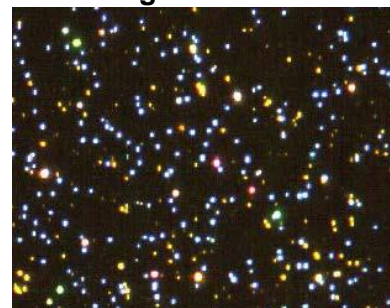
## Application Examples

- 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 $\mu$ m - 400 $\mu$ 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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