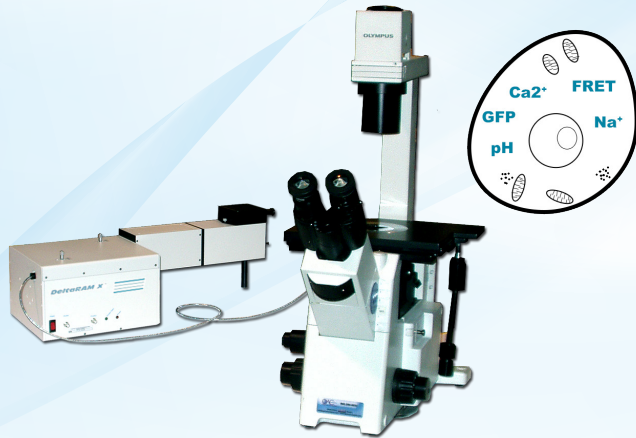
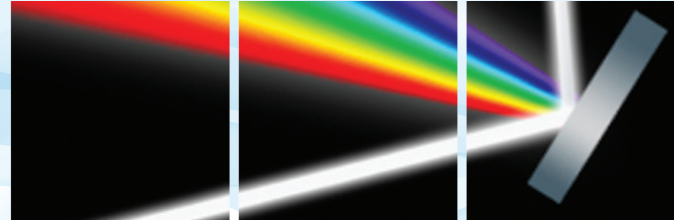


DeltaRAM™ X

Fluorescence Microscope Illuminator

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

The ideal fluorescence microscope illuminator for quantitative intracellular ion research



Features and Benefits

- Millisecond wavelength switching (and scanning) microscope illuminator
- Tunable wavelengths anywhere from 250 to 650 nm
- Continuously adjustable bandpass
- TTL shutter
- Couplers for all fluorescence microscopes
- No alignment required and uniformity assured

Typical Intracellular Applications

- Calcium
- FRET
- pH
- Sodium
- Potassium
- Magnesium
- Membrane potential
- Ca²⁺ transients
- Ca²⁺ mobilization
- Ca²⁺ waves
- Ca²⁺ oscillation
- Ca²⁺ spikes
- Ca²⁺ entry
- Capacitative Calcium Entry (CCE)
- Mitochondrial Ca²⁺
- Endoplasmic reticulum (ER) Ca²⁺ pool
- Lysosomal Ca²⁺
- Extracellular near membrane Ca²⁺
- Molecular binding
- Molecular interactions
- Protein conformation
- Gene interactions
- Reaction kinetics

The patented DeltaRAM™ X microscope illuminator is the ideal fluorescence illuminator for quantitative intracellular ion research. It utilizes a galvanometer-based Random Access Monochromator (RAM) that can switch between any wavelength in 2 milliseconds. The DeltaRAM™ X is a complete, self-contained, illuminator that includes a power supply, high intensity xenon light source, DeltaRAM™ X monochromator, TTL shutter and flexible liquid light guide. The wavelength position is a simple analog voltage control. All you need to add is a microscope adapter for your fluorescence microscope and a USB or PCI DAC interface depending on the software you will be using to drive the illuminator.



Specifications

Excitation wavelength range	250–650 nm
Wavelength selection speed	< 2 milliseconds
Beam uniformity	< 5%
Stray-light rejection	10-4
Wavelength accuracy	+/- 1 nm
Optical output	15 mW of optical output in 10 nm bandwidth
Wavelength bandwidth	Adjustable from 0–24 nm (manual adjust)
Microscope coupling	Two meter liquid light guide included, and optional adaptors for user specified fluorescence microscope (either direct or epi port coupled)
Wavelength control	BNC control voltage
Shutter control	BNC TTL

Compatible DeltaRAM™ X vendor and software platforms



Photon Technology International:
RatioMaster, EasyRatioPro



Molecular Devices:
MetaMorph, MetaFluor



Nikon Instruments: Elements



Micro-Manager
Open Source Microscopy Software



National Instruments: LabVIEW



Measurement Computing
DAC's

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OPTICAL BUILDING BLOCKS



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