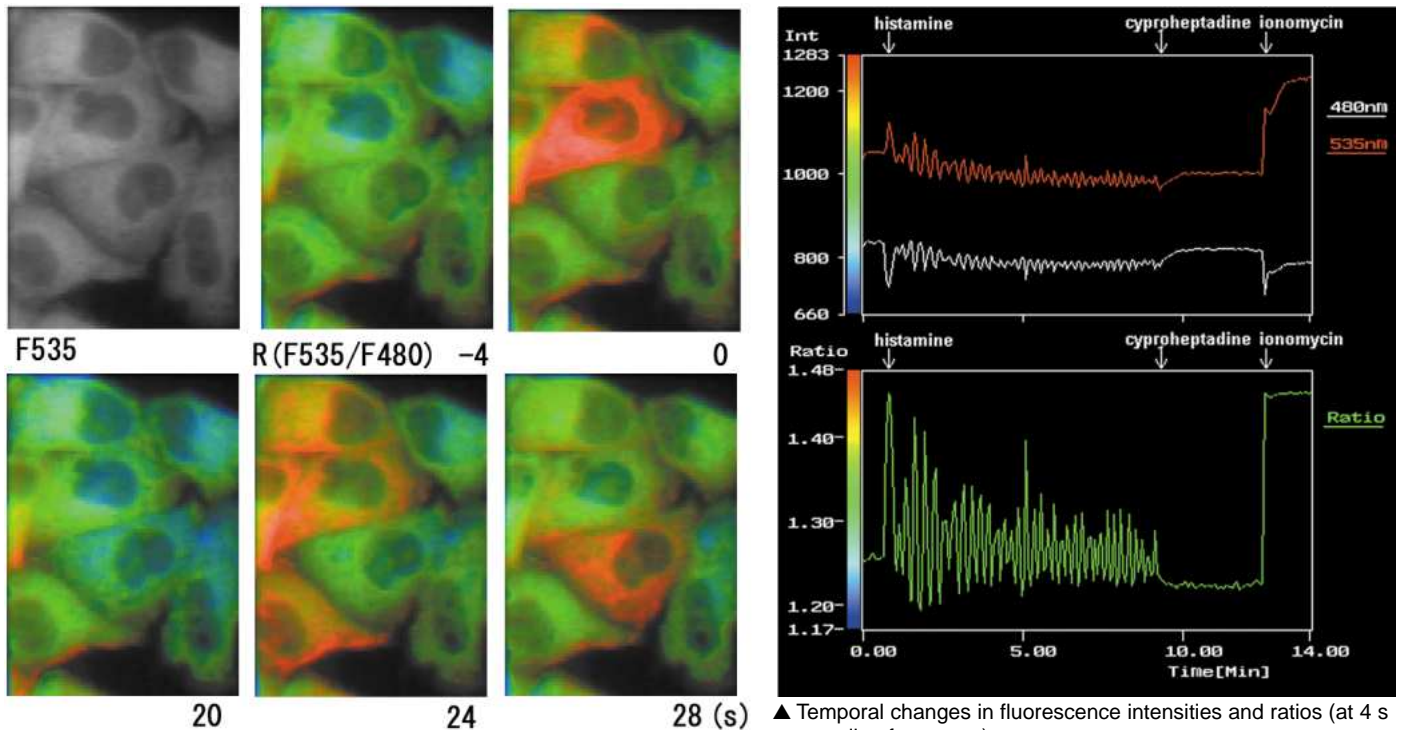


# PRODUCT INFORMATION

# AQUACASTROS/FRET W-View Optics

## Ratio imaging of calcium oscillations in HeLa cells expressing yellow cameleon-3.1

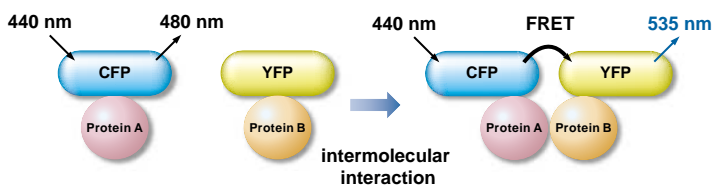


▲ Fluorescence image with superimposition (4 × 4 binning; 440 nm excitation wavelength; 480 nm and 535 nm fluorescence wavelengths)

▲ Temporal changes in fluorescence intensities and ratios (at 4 s sampling frequency)

(Data courtesy of Professor Atsushi Miyawaki, Laboratory for Cell Function Dynamics, Advanced Technology Development Center, Brain Science Institute, Institute of Physical and Chemical Research)

Fluorescence Resonance Energy Transfer phenomena is the excited energy transfer from donor's fluorescence state to acceptor's fluorescence state. Using this phenomena, real-time imaging of dynamics and structural change of intracellular biopolymer can be brought to reality. In the recent years, fluorescence imaging study using the Fluorescence Resonance Energy Transfer phenomena of Cameleon (Ca<sup>2+</sup> sensor) and FICRHR (cAMP indicator) is the focused attention in the research of intracellular information propagation.



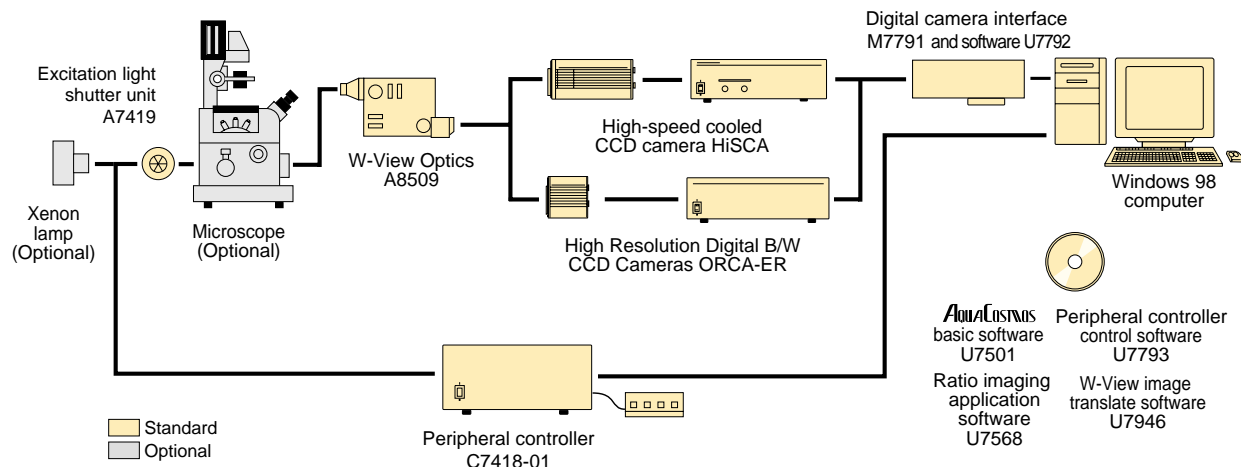
## Features

- Simultaneous measurement of two fluorescence wavelength images
- High speed ratio imaging
- Chromatic aberration correction
- Trigger input and output for peripheral equipment

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## System Configuration

In this example, the W-View optics has been used to measure FRET. Simultaneous observation of two fluorescence wavelengths allows realtime imaging of structural changes and movements of proteins within cells.



## W-View Optics A8509

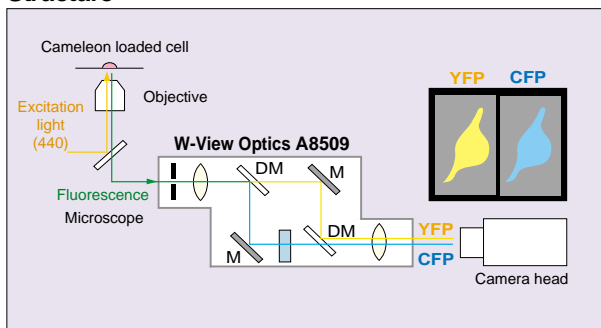


W-View optics A8509 splits input image into two images by its wavelength or polarization, and project these images to the camera. The two separated images are observed with one camera at the same time.

### • Features

- C-mount input, output
- Two separated images of wavelength or polarization can be observed with one camera.
- Chromatic aberration correction
- Mask size variable
- For 1/2 inch, 2/3 inch or 1 inch camera
- Image alignment by mirrors
- Dichroic mirror selectable
- A table to mount the A8509 is included

### • Structure



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