

A.F.T.E.R.[®]
triple fluorescence module
on Axiostar Plus from Carl Zeiss

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SYSTEMS SPECIFICATION

LED CASSETTES

Select excitation cassette(s) according to fluorescent dyes:

Lifetime: > 30.000 hours
Power: typically 3 W, depending on LED type
Excitation λ : see table

FRAEN A.F.T.E.R. [®] CASSETTES	EXCITATION
 UV	365 nm
 ROYAL BLUE	450 nm
 BLUE	480 nm
 CYAN (on request)	505 nm
 GREEN	535 nm
 YELLOW	590 nm
 RED	630 nm



Fluorescence LED
cassettes with
excitation
wavelengths

DRIVER UNIT

Different driver units available for single, dual or triple color control.

AC/DC adaptor: input 100-240V
output 7,5V, Max 15-18 W

Features: self detection of LED power
Option: battery pack for use on field

A.F.T.E.R.[®] MODULES

Fraen A.F.T.E.R.[®] is available as add-on kit for microscopes from:

- Olympus
- Carl Zeiss
- Nikon
- Leica
- Motic

For more detailed information please contact **Fraen Corporation** or your local distributor.

ADDITIONAL OPTICS

UV blocking filter: in filter carrier housing
Emission filters: in 3 to 6 positions sliding filter carrier
Mirror: enhanced Al + SiO₂ coating

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AMPLIFIED FLUORESCENCE

A.F.T.E.R.[®]

Amplified Fluorescence (by) Transmitted Excitation (of) Radiation

A revolutionary concept in
fluorescence microscopy



A.F.T.E.R.[®] Fluorescence LED module*

Amplified Fluorescence (by) Transmitted Excitation (of) Radiation

PRODUCT OVERVIEW

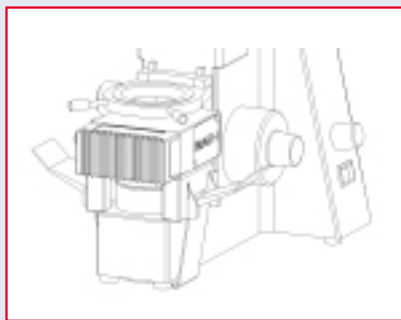
Fraen Corporation Srl develops integrated optical solutions for fluorescence microscopy, consisting of a unique, proprietary illumination system which can be attached to many current models of microscopes. This will provide fluorescence with astonishing results on a wide range of specimens and fluorochromes.

What's new about this?

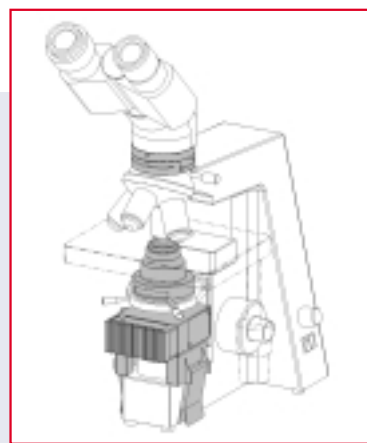
A high power solid-state (LED) source replaces the mercury and xenon arc-clamps found in traditional epifluorescence microscopy.

This approach allows significant increase of performance and light source lifetime, reduction of initial costs and operating costs, reduction of maintenance and heat production.

The module is designed to attach to a standard bright field microscope and does not change the characteristics of the microscope in any way. The fluorescence light source is used in transmission mode and will not void any warranties. Bright field microscopy is not affected since the halogen white light function remains intact, which means that transmitted light observation is possible without major changes in the optical configuration.



Clamp-on adaptor on Axiostar Plus from Carl Zeiss

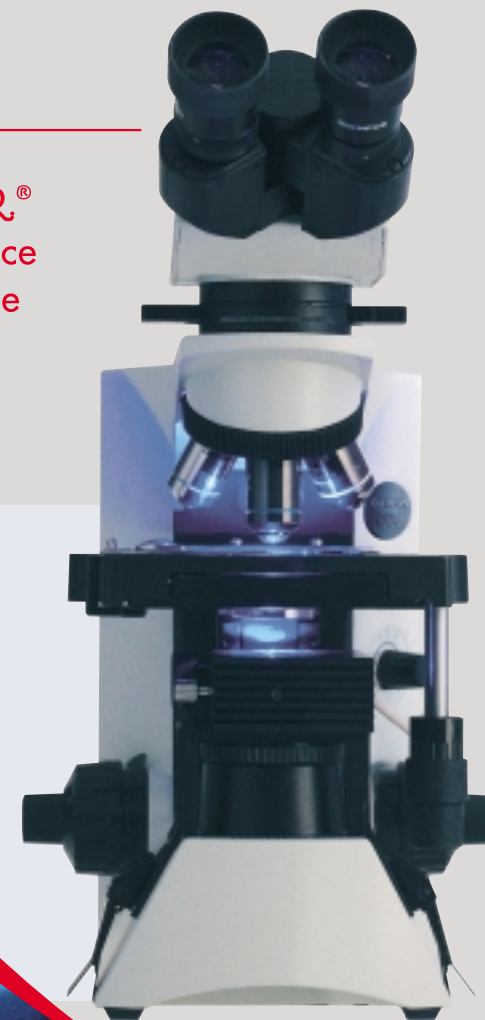


A.F.T.E.R.[®] Fluorescence LED on Axiostar Plus from Carl Zeiss

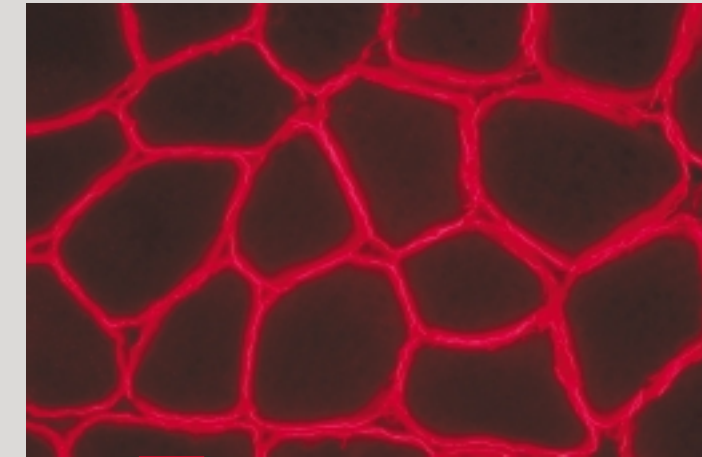
* International Patent Pending



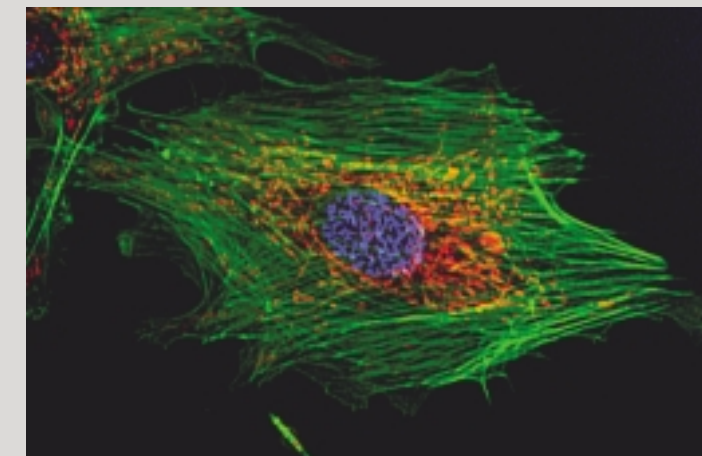
A.F.T.E.R.[®] Fluorescence LED module on Axiostar Plus from Carl Zeiss



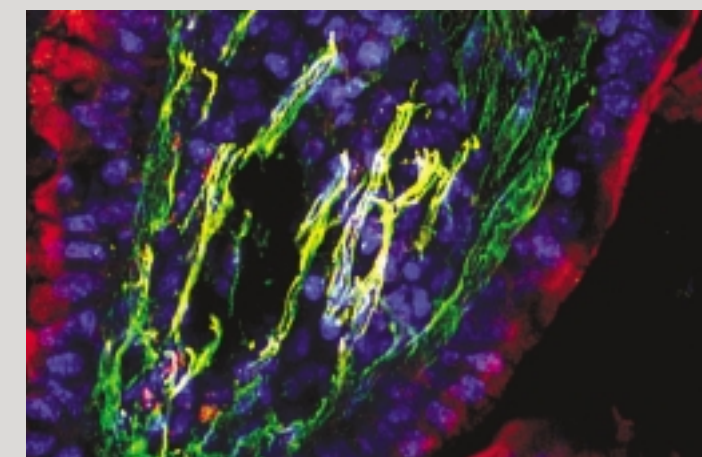
A.F.T.E.R.[®] Fluorescence LED module on a CX 31 Olympus microscope



Example of single color excitation: muscle, Alexa Fluor[®] 546



Example of three color excitation: BPAC cells, Dapi/Bodipy[®] Mito Tracker[®] Red



Example of four color excitation: gut, Dapi/Alexa Fluor[®] 488 Cy3[®]/Alexa Fluor 647

BENEFITS

The products were developed to provide equivalent performance and capability delivered in standard fluorescence microscopy equipment, but with a series of enhancements designed to make the technology accessible to more users, easier to operate and maintain, and significantly smaller.

The LED modules are light sources emitting an extremely efficient spectrum only in the desired bandwidth, thus ensuring a very good signal-to-noise ratio.

They are available from near UV across the visible light spectrum.

Standard colors are: 630 nm (red)
590 nm (yellow)
535 nm (green)
480 nm (blue)
450 nm (deep blue)
365 nm (UV)

Key Product Benefits:

One, two and three color excitation

No alignment of light source

Light source lifetime > 30.000 hrs

Regulation of each single color channel via adjustable electronic driver (reduce photobleaching)

Grab up to three colors in one time (no pixel shift)

No warm-up time

High S/N ratio

Smaller instrument footprint

Allows transmitted light observation

Battery pack option for operation on field