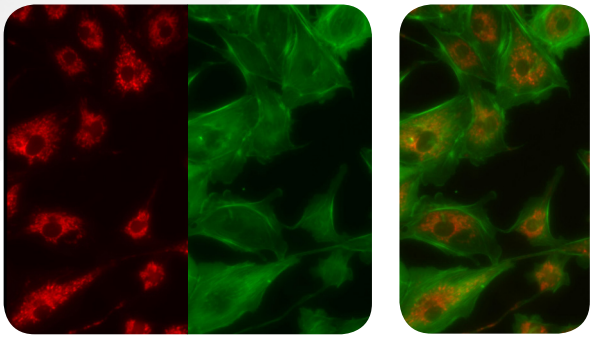
OPTOSPLIT II

DATASHEET

Two-way image splitter

The industry leading Optosplit II image splitter from Cairn Research divides an image into two separate, spatially identical components. Displayed side by side on a single chip, this elegant device effectively doubles your research capacity with one camera.

Splitting is usually performed on the basis of wavelength, allowing applications such as ratiometric calcium imaging or FRET, however, polarising beamsplitters are also supported. The two images can be captured simultaneously offering a major benefit over manual or electronic filter changers. A rectangular aperture is used to define the region to be imaged, with a set of simple controls allowing the user to align the two channels on a variety of camera chip sizes. The Cairn Optosplit II can significantly widen the scope of any fluorescence imaging system.

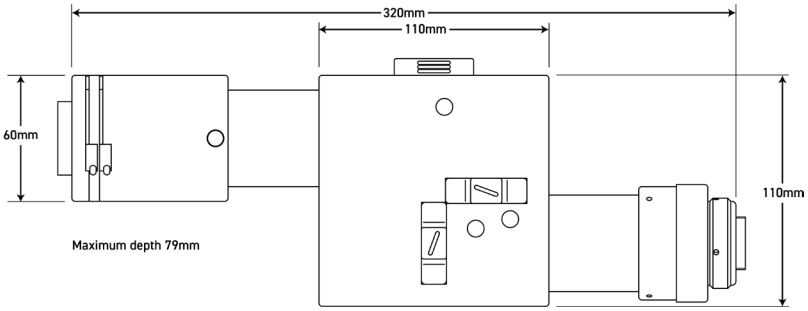


KEY BENEFITS

- Optimised for sensor sizes up to 18.8mm diagonal (13.3x13.3mm)
- User configurable filter cubes with industry standard filters/dichroics
- Magnification options - please ask for details
- Bypass mode to allow single wavelength imaging using either pathway
- Intuitive and independent x/y controls for simple alignment
- Accommodates ND filters or chromatic correction lenses
- Standard spectral range from 425nm to 875nm
- Supports cropped sensor modes
- Adjustable rectangular aperture for user defined field of view
- C-mount coupling to microscope or camera lens

APPLICATIONS

- Ratiometric calcium, voltage & pH imaging
- Förster Resonance Energy Transfer (FRET)
- Simultaneous dual probe widefield microscopy
- TIRF/Spinning disk confocal
- Simultaneous phase contrast/DIC and fluorescence
- Polarisation studies (anisotropy)



CAIRN RESEARCH

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MULTICHANNEL EMISSION SPLITTING RANGE

NO.1 IN OPTICAL PERFORMANCE, STABILITY AND USABILITY

DATASHEET

OptoSplit II & III

With an elegant configuration for simple side-by-side image-splitting, and optimised for large-sensor cameras, the OptoSplit delivers high throughput imaging at a realistic price. Ideal for FRET, ratiometric imaging, polarisation studies and most simultaneous imaging applications requiring two or three images. User-configurable cubes and intuitive x, y and focal adjustments offer convenience and simplicity.

Optosplit II Bypass

It builds on the success of the OptoSplit II, but adds a convenient single lever bypass mode making it more suitable for multi-user microscopes where simultaneous dual channels are only required for specific experiments alongside single wavelength recordings.

TwinCam

Splitter for dual channel imaging using two camera (upto 22mm diagonal). Perform simultaneous recording of two channels, polarisation states or z depths without having to reduce their size. Variable rectangular aperture allows for the use of cropped sensor modes for the fastest speeds. Now with new more rigid camera mounting clamps, magnetically aligned filter cube and pupil plane adjustment facility.

MultiCam

Similar to the TwinCam, but can accommodate up to four 22mm diagonal cameras. Variable rectangular aperture allows for the use of cropped sensor modes for the fastest speeds.

OptoMask

Enables precise FOV control for the high-speed, cropped sensor mode offered by several camera manufacturers including Andor and Roper Scientific. Supports up to 22mm diagonal sensors.

OptoSpin

An intelligently designed, fast-spinning and stepping filter wheel.
This slim unit has low inertia, enabling smooth operation and the ability to change between emission filters at 100Hz when synchronised with a suitable light source. Change filters without moving the camera. Mount two units together in the same 35mm optical path length for versatile combinations. (6 position for one filter wheel, 10 position for two).

Infinity Cube Coupling

Specifically designed for Optogenetics, flash photolysis, FRAP and widefield fluorescence, the Cairn Infinity Cube gives scientists direct access to the infinity-space of commercial upright microscopes and macroscopes. This allows for the efficient and flexible coupling of multiple independent light sources with each optimised for a different field of view, wavelength, polarisation state and / or other property.

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