

OPTOSPLIT III

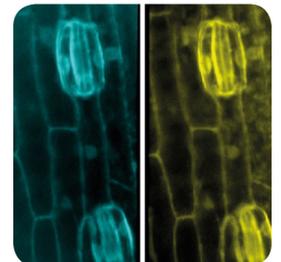
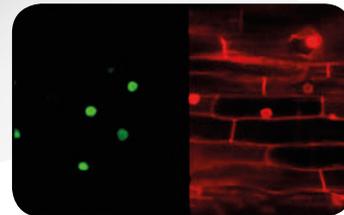
DATASHEET

Three-way image splitter

The Optosplit III triple image splitter from Cairn Research is a simple device for dividing an image into two, or three separate, spatially equivalent components which can be displayed side-by-side on a single camera chip.



Splitting is usually performed on the basis of wavelength and/or polarisation, allowing applications where there is a requirement for simultaneous, or high speed acquisition of multiple image emission bands or polarisation states. The simultaneous acquisition of up to three images offers a major benefit over manual or electronic filter changers, as there is no longer a need to pause acquisition while the filter position is changed. This allows your camera to be operated in high speed stream modes and reduces demands on the software.

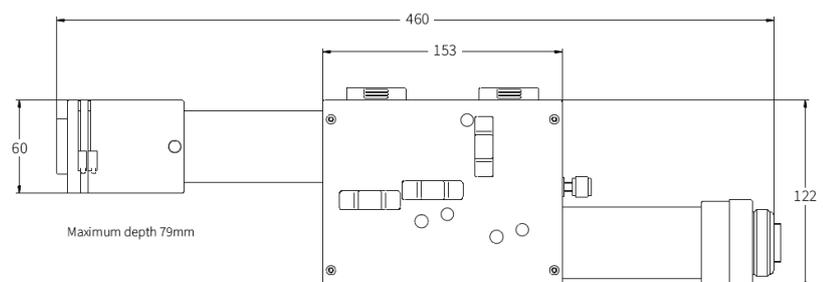


KEY BENEFITS

- Optimised for sensor sizes up to 18.8mm diagonal (13.3x13.3mm)
- User configurable filter cubes with industry standard filters/dichroics for dual or triple emission separation
- Magnification options - please ask for details
- Bypass mode to allow single wavelength imaging using central channel
- 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

- Triple fluorescence probe studies
- Polarisation Förster Resonance Energy Transfer (pFRET)
- Ratiometric calcium, voltage & pH imaging
- Polarisation studies (anisotropy)
- Simultaneous phase contrast / DIC and fluorescence
- Simultaneous multi-depth imaging



MULTICHANNEL EMISSION SPLITTING RANGE

DATASHEET

NO.1 IN OPTICAL PERFORMANCE, STABILITY AND USABILITY



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 imaging with two large sCMOS cameras. 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 large sCMOS 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 larger format 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 different field of view, wavelength, polarisation state and / or other property.