

OPTOSPLIT II BYPASS

DATASHEET

Engineered for super resolution quality

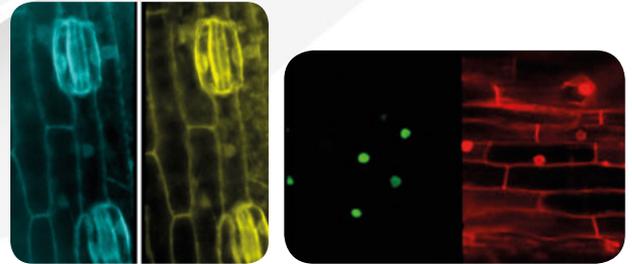
Two-way image splitter with enhanced performance and simple bypass mode

The Optosplit II Bypass image splitter is a simple and elegant device for dividing an image into two separate, spatially equivalent, components that can be displayed side by side on a single camera sensor.



The Cairn OptoSplit II BP is our best ever dual channel simultaneous imaging device for use with a single camera. 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.

Whilst maintaining compatibility with the OptoSplit II, the BP version now supports our new flat-face filter cubes and has enhanced long-term stability, pixel registration and reproducibility. Featurewise, the rapid Bypass control is complimented by additional space for more auxiliary components. It has a slightly larger footprint than the OptoSplit II and consequently can use longer focal ratio lenses with even better off-axis performance.

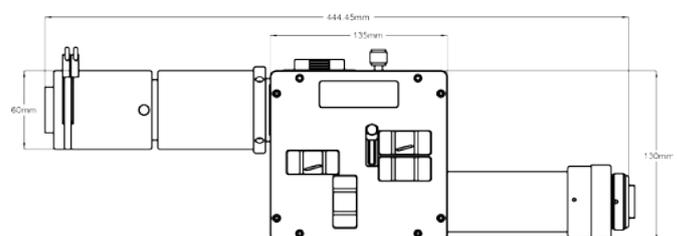


KEY BENEFITS

- Integral C-mount input and output ports (optional T or F mount)
- Simple & precise controls for image registration
- Interchangeable filter / dichroic holders
- Single lever switching from split to bypass
- 425nm to 875nm coatings on all surfaces
- 1X or 1.3X magnification
- Support for Large Sensors (LS) - 16.6 x 14 mm

APPLICATIONS

- Förster Resonance Energy Transfer (FRET)
- Ratiometric calcium, voltage & pH imaging
- Simultaneous multi fluorescent probe imaging
- Total Internal Reflection Fluorescence (TIRF)
- Spinning disk confocal
- Single Plane Illumination Microscopy (SPIM)
- Super resolution STORM / PALM / SIM
- Polarisation studies (anisotropy)
- Simultaneous dual depth imaging (using independent lenses)
- 3D super resolution PALM/STORM (using cylindrical lenses)
- Simultaneous phase contrast / DIC and fluorescence



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 provides extremely high throughput. 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.