OPTOSPIN25

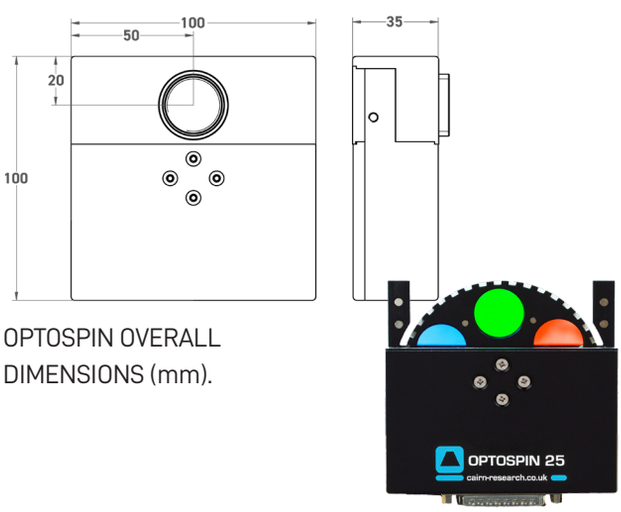
DATASHEET

25mm fast spinning and stepping filter wheel

The Cairn Optospin25 continues our long tradition in filter wheel design, dating back to the 1980s, but taking full advantage of the continuing developments in motor and control technology that have taken place since then. It builds on our tried and tested approach of mounting the motor directly within the hub of the filter wheel, in order to maintain a compact size (no motor bulge!) and to minimise the inertial and other losses associated with geared connections. Our previous design of this type used a relatively small wheel with 12.5mm diameter filters in order to further reduce the inertia - and hence the response time - but by using a newer and much more powerful type of motor, we have been able to obtain similar performance with this 25mm filter design.

APPLICATIONS

- Multi channel fluorescence imaging
- High speed ratiometric imaging
- FRET
- Spectrophotometry
- Low-vibration microscopy



OPTOSPIN OVERALL DIMENSIONS (mm).

KEY BENEFITS

- Stepping times down to 30msec between adjacent filters, 50msec between opposite ones
- Continuous spinning up to 7,500 rpm, set by internal or external reference frequency
- Compact size, only 100 x 100 x 35mm
- Two filter wheels can be mounted within the same overall 35mm optical path length
- Simple filter loading system (leaves camera in place)
- Six standard 25mm filter positions per wheel
- Paired wheels can simulate a single ten-position wheel, with substantial speed advantage
- Additional external control options
- USB controller for up to two wheels
- Wide range of microscope adapters for illumination and detection
- USB drivers for various software packages

CAIRN RESEARCH

sales@cairn-research.co.uk
+44(0)1795 590140
tech@cairn-research.co.uk
www.cairn-research.co.uk

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, 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 adjustments offer convenience and simplicity.

Optosplit II Bypass

This 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 channel imaging is required for specific experiments alongside single wavelength recordings.

MultiSplit

Up to four channels simultaneously on one camera chip! The Multisplit uses the four quadrants of a single camera in a 2×2 square format. The Multisplit has the further possibility of simultaneous multi-depth imaging which is particularly attractive, as we can now do this at four depths rather than just two or three.

Multi Camera Adapters

Splitters for up to four channel imaging using multiple cameras (each). Perform simultaneous recording of multiple wavelengths, polarisation states or z depths using the full camera FOV without having to reduce their size. Variable rectangular aperture allows for the use of cropped sensor modes for the fastest speeds. Includes interchangeable camera mounts for C, F and T-mount cameras.

OptoMask

Enables precise FOV control for the high-speed, cropped sensor mode offered by several camera manufacturers including Andor and Teledyne..

OptoSpin 25 & 32

An intelligently designed, fast-spinning and stepping filter wheel, now with 25mm and 32mm wheels available and a range of microscope adapters. This slim unit has low inertia, enabling smooth operation and the ability to step between emission filters in 30ms, and spin continuously at 7500rpm when synchronised with a suitable light source. Change filters without moving the camera and mount two units together in the same 35mm optical path length for versatile combinations. (6 position for one filter wheel, 10 position for two).

CAIRN RESEARCH

sales@cairn-research.co.uk
+44(0)1795 590140
tech@cairn-research.co.uk
www.cairn-research.co.uk