

# OPTOSPIN IV

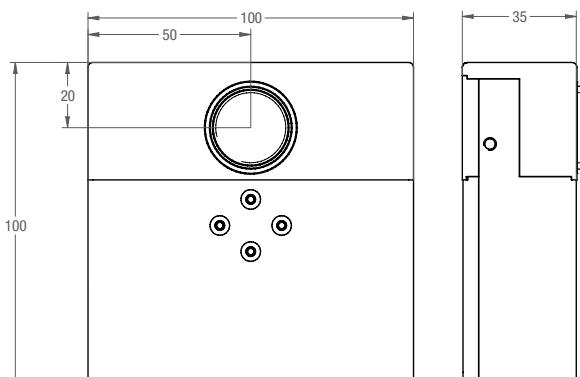
DATASHEET

## Fast spinning and stepping filter wheel

The Cairn Optospin IV 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 10,000 rpm (1msec per filter), 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
- Control via USB or digital interface
- Control boxes for two or four wheels
- Full range of adapters for illumination and detection in the biosciences