

Adjustable Optogenetics Drive



The aoDrive is a unique product, studied to use optogenetics in free moving experiments. It is a customized independently adjustable optogenetics drive made through 3D printing processes. The methodology used during development has allowed obtaining the incredible weight of only 3 grams while incorporating many key features.

The drive hosts up to 19 electrodes for neuronal registration combined with an optical fiber for optogenetic stimulation. The height of the electrode array and the optical fibre are independently adjustable. The aoDrive can be provided in a single configuration (for the stimulation and recording in one area of the brain) or tandem configuration (for the simultaneous and independent stimulation and recording in two different areas of the brain).

The aoDrive is completely customizable to suit specific research needs.

Main features



Independent adjustable z position for electrodes and optic fiber through precise screw regulation



Completely customizable based on research needs



Extremely light, robust and precise thanks to the realization with 3D printing technology



Optimized design for functionality and durability even under strenuous experimental conditions

Specifications

Weight	3 grams
Dimension	30 x 13 x 13 mm
Channels	8-19 recording channels + 1 optical stimulation channel
Electrodes movement in Z	250µm / turn
Fiber movement in Z	800µm / turn
Electrodes connector	ZIF-Clip and Omnetics compatible
Optical fiber connector	1,25 mm sleeve
Optical fiber features	230µm fibre with high or low NA