



Neuralynx

advanced electrophysiology solutions

neuralynx.com / sales@neuralynx.com - Bozeman, Montana

# Fiber Mounted LEDs (FLEDs)

deliver optogenetic stimulation from directly inside a microdrive

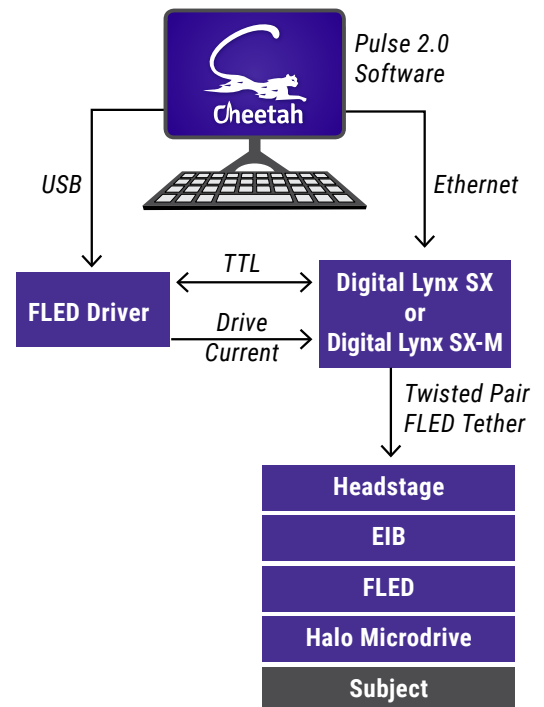
Fiber Mounted LEDs (FLEDs) are miniaturized LED light source modules with integrated fiber waveguide that seamlessly mount into a single Halo Microdrive shuttle for optogenetic stimulation.

The LED drive current is delivered through the tether-headstage-EIB differential stimulus channels.

- deliver optogenetic stimulation from directly inside a microdrive
- integrated into microdrive shuttle - no fiber optic cable running to the subject
- simplified optical assembly increases stimulus and light delivery consistency
- 4 color options: blue, amber, red and green. Use same color or combination
- integrate optogenetic stimulation into existing Digital Lynx SX/SX-M
- mount up to 3 FLEDs in one microdrive - same color or combine to mix colors

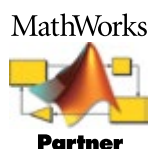
## Specifications

<b>Dimension (LxWxH)</b>	9mm X 4mm X 5mm			
<b>Mass</b>	≈ 0.2 grams			
<b>Shuttle Drive Screw</b>	1 mm			
Color	Wavelength	Pulse Power	Illuminance	Fiber Diameter
<b>Blue</b>	465 nm	10 mW	188 mW/mm <sup>2</sup>	200 μm
<b>Amber</b>	590 nm	5 mW	96 mW/mm <sup>2</sup>	200 μm
<b>Red</b>	625 nm	5 mW	96 mW/mm <sup>2</sup>	200 μm
<b>Green</b>	525 nm	5 mW	96 mW/mm <sup>2</sup>	200 μm



*Fiber Mounted LEDs:*

*Tiny devices that provide huge advantages over off-board light sources!*





# Neuralynx

advanced electrophysiology solutions

neuralynx.com / sales@neuralynx.com - Bozeman, Montana

## FLED Driver with Pulse 2.0 Software

A current source driver with 3 channels/outputs for use with Fiber Mounted LEDs and Halo Microdrives – providing precision real-time light stimulus sequencing and consistent light output delivery.

Define, trigger and store up to 255 user-defined sequences using Neuralynx's Pulse 2.0 software.

Output Stage features:

- Current pump-based driver topology
- External trigger & set point control
- Reverses bias when outputs are in "OFF" state eliminating unexpected illumination



FLED Driver

### Specifications

<b>Current</b>	350 milliamp
<b>Stimulation Frequency</b>	5 kHz
<b>TTL Output Port for Digital Lynx SX</b>	8 bits
<b>TTL Input Port for external hardware triggers</b>	8 bits

## Twisted Pair FLED Tethers

Required for use with Fiber Mounted LEDs to carry LED drive current.



### FLEDs Compatibility

Halo Microdrives

FLED Driver & Pulse 2.0 Software

Digital Lynx SX / SX-M