

Lux Optical Manifolds

Hardware Reference



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Table of Contents

Lux Optical Manifolds

Lux Manifold Overview	4
Light Pathway	5
Available Filters	5

Lux Optical Manifolds



Lux Manifold Overview

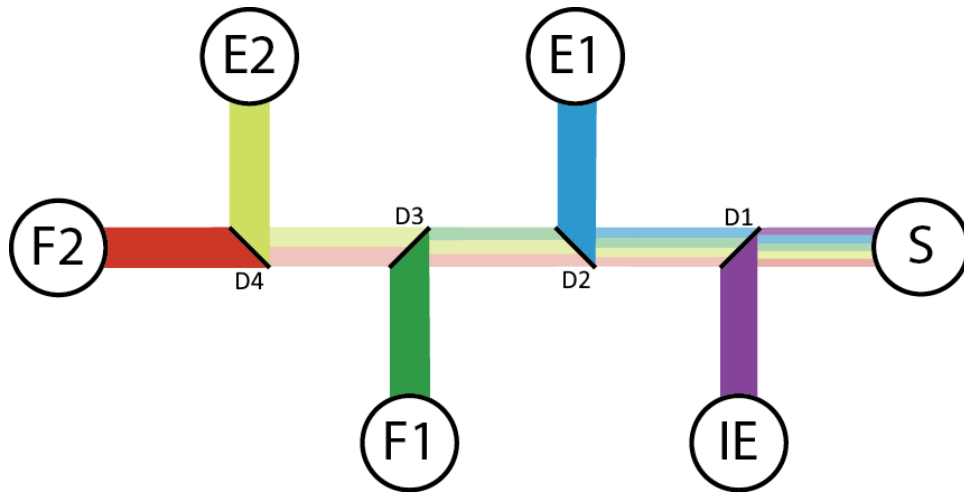
The Lux manifold is a modifiable beam filter that consists of a series of dichroic mirrors and light filters for fiber photometry and optogenetic stimulation.

Each Manifold is custom configured for standard optical sensors, like GCaMP, RCaMP, dLight, GRAB, and SnFR. However, the Lux manifold was specifically designed to easily swap the sensor filters to match the best isosbestic, excitation, and emission spectra of your biosensor.

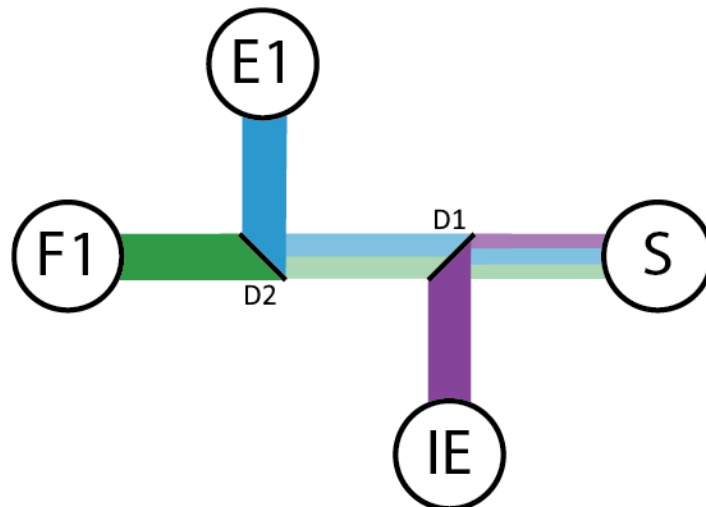
Part Numbers:

- LxM4-405 - Lux 4-Port Optical Manifold with 405 nm IE Standard
- LxM4-415 - Lux 4-Port Optical Manifold with 415 nm IE Standard
- LxM6-405 - Lux 6-Port Optical Manifold with 405 nm IE Standard
- LxM6-415 - Lux 6-Port Optical Manifold with 415 nm IE Standard
- LxM6-GRAB - Lux 6-Port Optical Manifold with 430 nm IE Standard

Light Pathway



LxM6 Schematic



LxM4 Schematic

Available Filters

Here are the possible filters for each port. Each port is labeled with the port name and its center-bandwidth spec. In the case of the F2 port without any light filter, it is labeled "F2 -".

Filter Port	Center-Bandwidth (FWHM) (nm)	Total Bandwidth (FWHM) (nm)
IE	405-10	400-410
	415-10	410-420
	430-10 [^]	425-435 [^]
E1	472-35	455-490
	494-25 [^]	482-507 [^]
F1	520-41	500-541
	534-25 [^]	522-547 [^]
E2	560-10	550-570
F2	614-52	588-640
	607-36	589-625
	No Filter	

Dichroic Mirror	Cutoff (nm)
D1	435
D2	482
	495 [^]
D3	552
D4	562

[^] LxM6-GRAB defaults

The dichroic mirrors are fixed per device, but the optical filter ports are swappable. The back plate of the LxM can be removed and the optical filters can be swapped as needed with a compatible filter. Contact [TDT Tech Support](#) for assistance.

Important

The Lux components have an FC connector with a small key that must be aligned to the fiber optic cable. This key is in the 12 o'clock position on all Lux Manifold components.

See the [Fiber Photometry User Guide](#) for information on making optical connections.