

Materials List for:

# Large Volume, Behaviorally-relevant Illumination for Optogenetics in Non-human Primates

Leah C Acker<sup>1,2,3</sup>, Erica N. Pino<sup>1,4,5</sup>, Edward S. Boyden<sup>1,6,7</sup>, Robert Desimone<sup>1,7</sup>

<sup>1</sup>McGovern Institute, Massachusetts Institute of Technology

<sup>2</sup>Harvard-MIT Division of Health Sciences and Technology

<sup>3</sup>Department of Anesthesiology, Duke University Medical Center

<sup>4</sup>Department of Biology, Massachusetts Institute of Technology

<sup>5</sup>Division of Pharmacoengineering and Molecular Pharmaceutics, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill

<sup>6</sup>Media Lab and Department of Biological Engineering, Massachusetts Institute of Technology

<sup>7</sup>Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology

Correspondence to: Leah C Acker at [leah.acker@duke.edu](mailto:leah.acker@duke.edu)

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## Materials

Name	Company	Catalog Number	Comments
Plastic optical fiber	Industrial fiber optics	SK-10	250 micron diameter, Super Eska line
Wire stripper	Klein Tools	11047	22 gauge
Vise Clamp	Wilton	11104	Generic table mount vice clamp
Dual temperature heat gun	Milwaukee	8975-6	570 / 1,000 °F
Lab marker	VWR	52877	
Dissection microscope	VistaVision	82027-156	Stereo microscope w/ dual incandescent light, 2X/4X magnification, available from VWR
Lab tape	VWR	89097-972	4 pack of violet color; however, tape color does not matter
Silicon carbide lapping sheet	ThorLabs	LF5P	5 micron grit, 10 pack
Aluminum oxide lapping sheet	ThorLabs	LF3P	3 micron grit, 10 pack
Aluminum oxide lapping sheet	ThorLabs	LF1P	1 micron grit, 10 pack
Calcined alumina lapping sheet	ThorLabs	LF03P	0.3 micron grit, 10 pack
Hot knife	Industrial fiber optics	IF370012	60 Watt, heavy duty
Fiber inspection scope	ThorLabs	FS201	optional
Stainless Steel Ferrule	Precision fiber optics	MM-FER2003SS-265	265 micron inner diameter
1 mL syringe	BD	14-823-30	Luer-lok tip is preferable to reduce risk of leakage, but not strictly needed
Plastic epoxy	Industrial fiber optics	40 0005	
18 gauge blunt needle	BD	305180	1.5 inch length
Lint-free wipe (KimWipe)	ThorLabs	KW32	available from many vendors
Light absorbing foil	ThorLabs	BKF12	
Electrical tape	3M	Temflex 1700	Optional, may substitute other brands / models
26 gauge sharp needle	BD	305111	0.5 inch length
Micromanipulator	Siskiyou	70750000E	may substitute other brands/ models
Steretactic arm	Kopf	1460	may substitute other brands/ models

Laser safety goggles	KenTek	KCM-6012	must be selected based on the color of laser used, example given here
Laser or other light source	vortran	Stradus 473-50	example of blue laser
Integrating sphere	ThorLabs	S142C	Attached power meter, also available from ThorLabs, item #PM100D
Ultem recording chamber	Crist instrument company	6-ICO-J0	Customized with alignment notch
Tower microdrive with clamps	NAN	DRTBL-CMS	
Guide tube	Custom	N/A	Made from 25 gauge spinal needle (BD) or blunt tubing
NAN driver system	NAN	NANDrive	
Custom grid design	custom	custom	plans available upon request
Blunt forceps	FischerScientific	08-875-8A	generic stainless steel blunt forceps
Digital calipers	Neiko	01407A	available on amazon.com. May select a finer resolution caliper for more precise measurements.
Patch cable	ThorLabs	FG200LCC-custom	This is one example of many possible patch cables. As long as the fiber diameter is less than or equal to the fiber diameter of the large volume illuminator and as long as the connectors interface, any patch cable (glass or plastic, vendor purchased or made in the lab) is fine for this application.
Clear plastic dust caps	ThorLabs	CAPF	Package of 25
ceramic split mating sleeve	Precision Fiber Products, Inc.	SM-CS1140S	