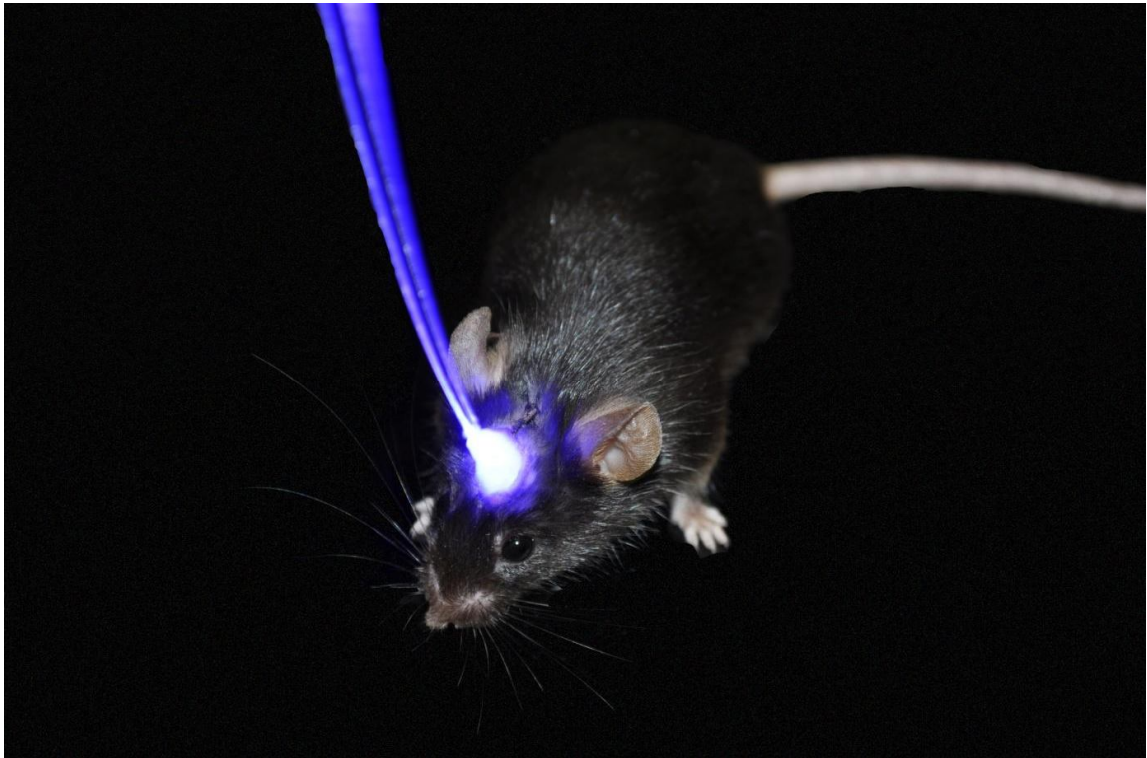




- 532 + 473nm(460nm) fiber coupled: Brain Stimulus Illumination System**
- 589 + 473nm(460nm) fiber coupled: Brain Stimulus Illumination System**
- 593 + 473nm(460nm) fiber coupled: Brain Stimulus Illumination System**
- 561 + 473nm(460nm) fiber coupled: Brain Stimulus Illumination System**
- 635 + 473nm(460nm) fiber coupled: Brain Stimulus Illumination System**
- 660 + 473nm(460nm) fiber coupled: Brain Stimulus Illumination System**



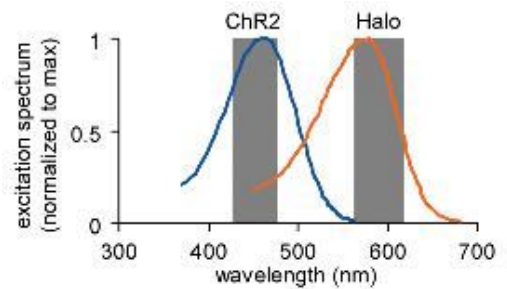
Light excitation to Cell

Loaded light sensibility proteins, such as Channelrhodopsin-2 (ChR2) and Halorhodopsin (NpHR), could be excited by a wavelength for specified nerve to be on/off.

Publish: Nat Rev Neurosci. 2007 Aug;8(8):577-81.

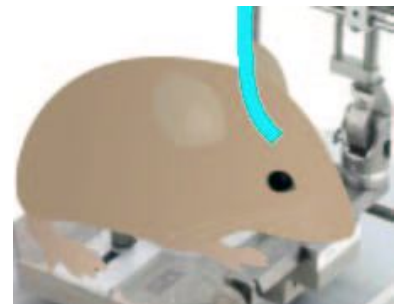
[Circuit-breakers: optical technologies for probing neural signals and systems.](#)

Zhang F, Aravanis AM, Adamantidis A, de Lecea L, Deisseroth K.



Laser Wavelength

For selection of light source, it must be reasonable and able to use milli-second pulsing and power control that are used with standard electrical stimulation. Also, plural wavelength must be mixed with high efficiency coupling to deliver to brain. Currently we use 445 – 473nm for ChR2 and 532nm, 561nm, 589nm or 593nm for NpHR. We also provide wavelengths mixing unit.





Stimulation signal function generator

We provide the system that can be used together with function generator that is used by Neuroscientists.



Function generator



Two wavelength fiber coupled system



Single wavelength fiber coupled laser

Function

Standard:

TTL modulation

Key switch

On/off switch

Interlock

1pcs 1M fixed MM fiber

Analogue modulation option

Power adjustable knob option

Current display option

ND filters slot option

Removal fiber coupler + fiber option

Low noise version on request

Switch remotely Option

Fittings options

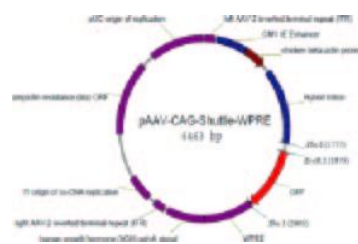
Fiber connector to connect fixed fiber with additional fiber

Additional 1M 62.5um, 100um 200um or 400um fiber

ND filters to change the output power as option

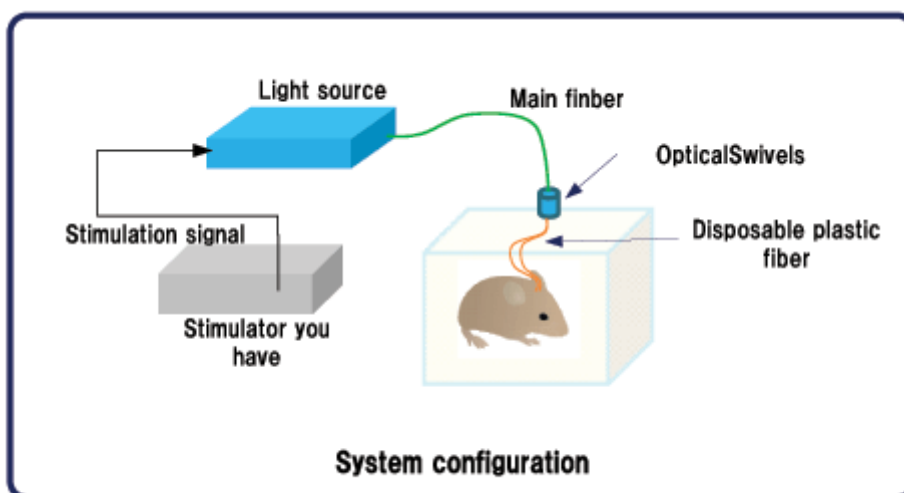
Beam expander option

Fiber tongs for option

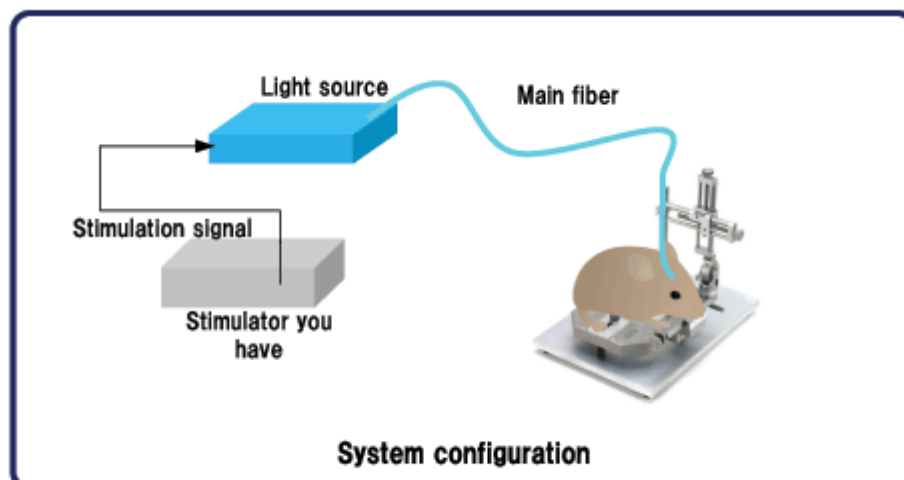




System configuration



System configuration





Standard Integrated Version



Specifications:

Model	SDL-473-050MFL
Output Power @ 25 °C	50mW----other output power are available
Wavelength	473nm+/-1nm
Transverse mode	Fiber coupled
Operating Mode	CW
Power Stability after warm-up	<5% (over 2 hours) ----other stability are available
Warm-up time	< 15 minutes
Fiber Connector	FC or SMA905
Fiber Core	MM 200μm optical fiber 1 meters ----other fiber core and length are available
NA.	0.22~0.39
Point stability after warm-up	<0.05mrad
Operating temperature	10~35°C
Expect life time	>10000 hours
Warranty time	1 year

Standard Integrated Version

Specifications:

Model	SDL-593-050MFL
Output Power @ 25 °C	50mW----other output power are available
Wavelength	593nm+/-1nm
Transverse mode	Fiber coupled
Operating Mode	CW
Power Stability after warm-up	<5% over 2 hours----other stability are available
Warm-up time	< 15 minutes
Fiber Connector	FC or SMA905
Fiber Core	MM 200μm optical fiber 1 meters ----other fiber core and length are available
NA.	0.22~0.39
Point stability after warm-up	<0.05mrad
Operating temperature	10~35°C
Expect life time	>10000 hours
Warranty time	1 year

- Laser technology support are available, please contact us.
- Other custom-made wavelengths mixed system are available on request.