

Wireless Dual Channel Opto-Genetic Stimulation System

» For Neuroscience Research Applications

FEATURES

- » Two External TTL Stimulation triggers available on USB Dongle
- » Available with 2 channels, independent timing and brightness control.
- » Blue LED 465.6nm wavelength.
- » 37mW typical output intensity at 20mA.
- » 14X17X5mm Headstage with 4.0 gram weight with 60mAH rechargeable battery.
- » Communicates data with Opto StimWare® via USB dongle.
- » 8 pin Omnetics nano connector to interface to multitude of LEDs.
- » Timing accuracy as short as 50µs.
- » 12 bit brightness resolution.
- » Inductive powering accessory for 24/7 testing.

Opto Stim Ware® Pattern Generation Software

Stimulator Headstage



USB Dongle Transceiver



PRODUCT DETAILS

Triangle BioSystems International presents a dual channel wireless neural Opto-genetic stimulation system that allows researchers to generate and upload two separately customizable pulse patterns via a USB dongle transceiver. The complete system is comprised of a wireless stimulating headstage with integrated battery, implantable blue LED, a USB dongle transceiver and Opto StimWare® pattern generation software. The StimWare® software interface allows the user direct control over the details of the uploaded stimulation pattern, including three tiers of nested patterns, on/off function and a manual pattern trigger option.

This small headstage unit can be quickly and easily mounted on an animal's head and, depending on the programmed signal frequency and amplitude, can provide up to weeks of wireless Opto-genetic stimulation before draining the battery completely. Additionally, this headstage can be used concurrently with our wireless, tethered or multiplexed neural recording headstages.



OptoStim Headstage
with LED Optrode

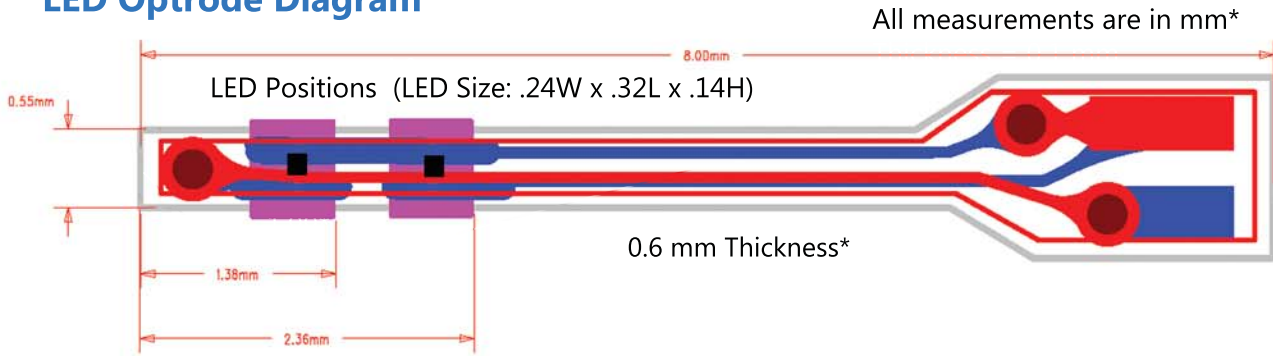


LED Optrode Specifications

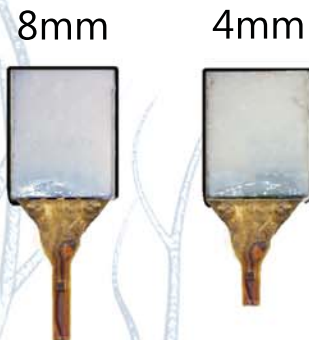
S-Series

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LED Optrode Diagram



LED Optrode Sizes



OptoStim Headstage



Charging Connector



Omentics Female
TBSI P/N: A70008

SYSTEM SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNITS	NOTES
Power Supply					
Battery life	3		5.5	Hours	Re-chargeable battery with 15 minute recharge time
OptoStim Headstage Mechanical Specs					
Length		19.6		mm	Edge to Edge
Width		17.8		mm	Edge to Edge
Height		10.5		mm	Edge to Edge
Weight		2.9		grams	With connector and dipped package
Output Connector					8-Pin Omentics 25 mm

@ 20mA and 50% Duty Cycle - Max Temperature Variance is .5 Deg C per LED