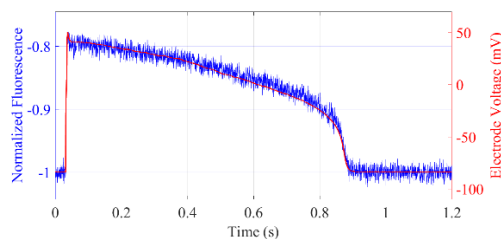


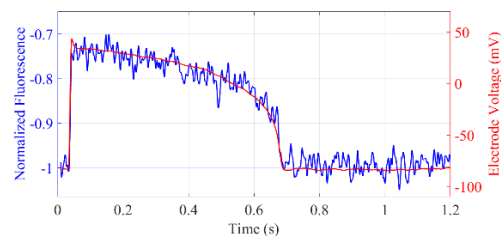
Cyto Cybernetics

Optical Action Potentials for Every Lab

A complete system to measure optical action potentials from cultured cells on your microscope, which connects to your existing data acquisition system.



Ensemble Averaged Single Cell Action Potentials

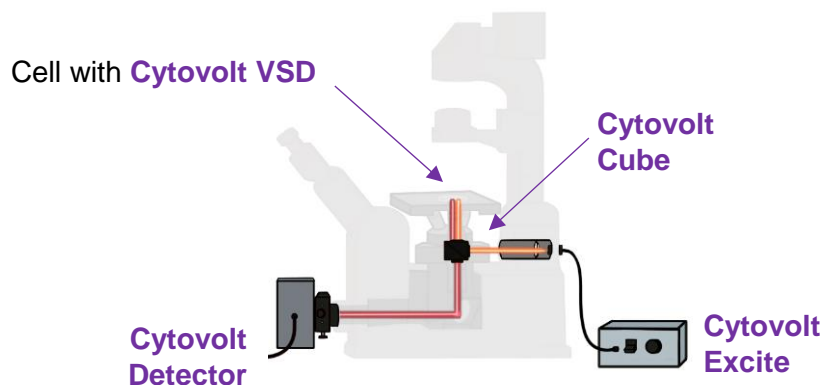


Single Sweep Single Cell Action Potential

Our affordable, easy to use, single cell fluorescence recording system makes high quality optical measurements available to all. Our kit combines an optimized combination of voltage sensitive dye, excitation source, filter cube, and high sensitivity detector.

Our system features:

- **Cytovolt Dye** Long lasting voltage sensitive dye
- **Cytovolt Excite** High-stability/low-noise excitation designed for **Cytovolt** dyes
- **Cytovolt Cube** Matched filter cube for our **Cytovolt** dyes
- **Cytovolt Detector** High-sensitivity/low-noise detector optimized for **Cytovolt** dyes

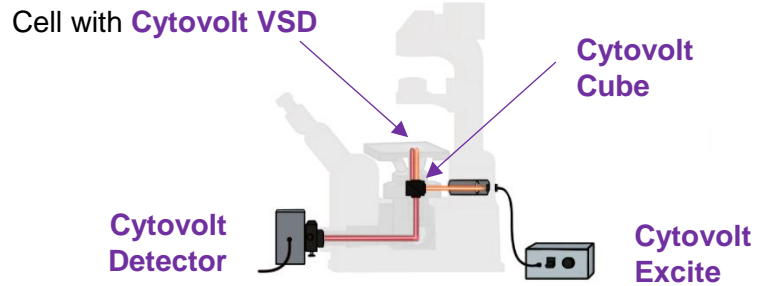


www.CytoCybernetics.com

1-855-351-6285

Voltage Sensitive Dye Kit

Technical Specifications



Cyto Volt1 – Voltage Sensitive Dye

Experiment Duration: 4 hours

Toxicity: NONE

Tau load (min): 5-10

Tau rundown (min): >160

Tau internalization (min): 165

$\Delta F/F_{max}$: 15-20

APD₅₀ Change Rate: 1.4 (5.3%/hr) Fluo Volt: <13%/s (46800%/hr)

Quantum Yield: 0.3

Ex/Em Shift (nm): >190

Ex/Em Color: Re/Far Red-NIR

Comparison: QuasAr 30 min; di-4-ANEPPS 36 min; di-8-ANEPPS 1 hr; BERST1 1 hr; Fluo Volt 2 hr.

QuasAr Low; di-4-ANEPPS low/medium; di-8-ANEPPS low; BERST1 low; Fluo Volt medium/high.

di-4-ANEPPS 4.8 min; di-8-ANEPPS 10-20 min; Fluo Volt 10-45 min.

QuasAr 15 min; di-4-ANEPPS 15 min; di-8-ANEPPS >60 min; BERST1 5; Fluo Volt >90

di-4-ANEPPS 32-67 min

QuasAr 21-48; di-4-ANEPPS 8-9; di-8-ANEPPS 12; BERST1 24; Fluo Volt 27.

Fluo Volt: <13%/s (46800%/hr)

QuasAr 0.008; di-4-ANEPPS 0.3; di-8-ANEPPS 0.3; BERST1 0.017.

QuasAr 70; di-4-ANEPPS 170; di-8-ANEPPS 170; BERST1 25; Fluo Volt 15.

QuasAr & BERST1 Red/Far Red; di-4-ANEPPS & di-8-ANEPPS Green/Red; Fluo Volt Blue/Green.

Cyto Volt Excite

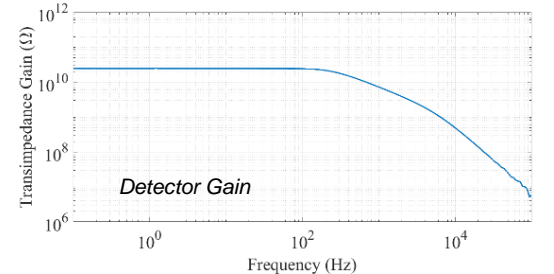
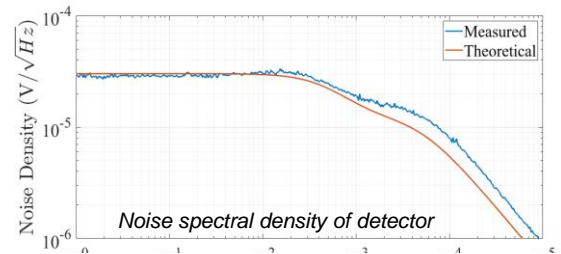
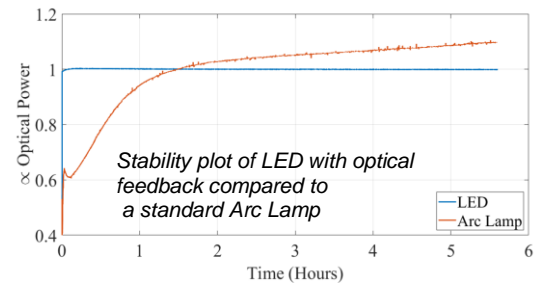
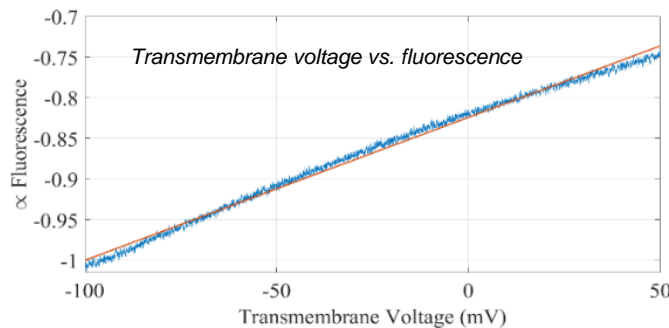
High-stability/low-noise excitation designed for Cyto Volt dyes. LED controller offers high stability with <0.5% drift over 5.5 hours. Far superior to a standard Arc lamp

Cyto Volt Cube

Custom Cubes are custom built for your microscope. Cubes contain high quality filters (OD > 4) matched to work with Cyto Volt dyes.

Cyto Volt Detector

High-sensitivity/low-noise detector optimized for Cyto Volt dyes.



Components in this kit are covered by the following patents:

Patent No. 8155730. Composition, Method, System, & Kit for Optical Electrophysiology. Issued: 10/14/2012. Pertsov, Matiukas, Loew, Wuskell.

Patent No. 9,357,924. Composition, Method, System, & Kit for Optical Electrophysiology. Issued: 5/19/2016. Pertsov, Matiukas, Loew, Wuskell.

Patent No. 9,636,424. Composition, Method, System, & Kit for Optical Electrophysiology. Issued: 5/2/2017. Pertsov, Matiukas, Loew, Wuskell.

Provisional Patent No. 62/744,883 High Sensitivity Photodetector with High gain Transimpedance Amplifier. Filed: 10/12/2018. Costantino.