



Where Light Meets Life™

Tuolumne

Quad Amplifier Module

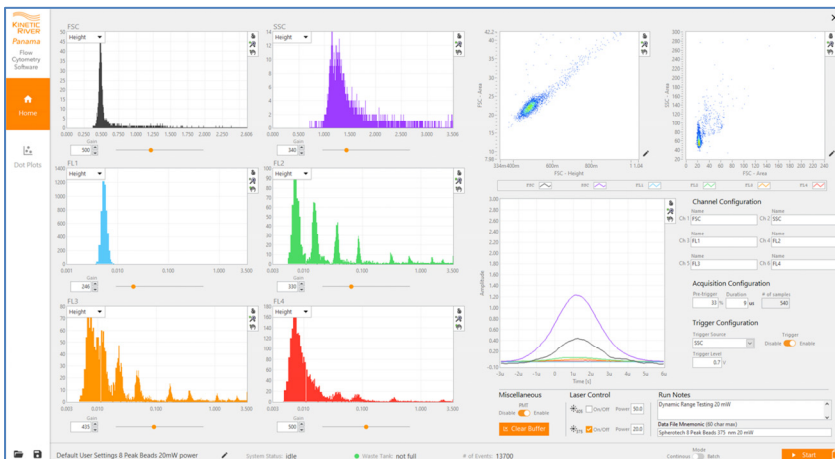
Tech Notes

For many cutting-edge applications in flow cytometry, off-the-shelf components do not meet your exacting requirements. Whether you're customizing an existing cytometer or building your own, the **Tuolumne** will simplify the process. The **Tuolumne** quad transimpedance amplifier module provides **fixed-gain signal amplification** to suit your needs.

Designed to work with both **traditional PMTs as well as Silicon Photomultipliers (SiPMs)**, the **Tuolumne** allows you flexibility in customizing your instrument. This standalone unit is compact and easy to use, with simple I/O and power connections for **plug-and-play convenience**. The **Tuolumne** delivers excellent performance at low cost in a small, lightweight package.



The Tuolumne is a compact (9" x 8.5" x 3") quad port PMT amplifier module for use in flow cytometry applications



The Panama software for instrument control and data visualization

The **Tuolumne** provides low noise amplification of output from PMTs or other devices that require an amplified current-to-voltage signal. It offers a **broad input signal range**, and a simple flip of a switch allows for inverted output signal. The **Tuolumne** comprises a 4-channel amplifier board in a compact housing, with I/O provided through SMA-type connectors for easy hook up.

The **Tuolumne** system is compatible with Kinetic River's intuitive, easy-to-use **Panama** flow cytometry software for instrument control and data visualization. The combination of the **Tuolumne** and the **Panama**, along with the **Shasta** ultrastable Fluidics Control Module, provide researchers with all the the flexibility their cutting-edge research requires.

The **Tuolumne** puts the performance of your flow cytometer in your hands.

The Tuolumne, or use thereof, may be covered in whole or in part by patents in the U.S. and other jurisdictions. A current list of applicable patents can be found at <https://www.kineticriver.com/kinetic-river-corp-patents>.



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Quad Amplifier Module Specifications

I/O

Uses SMA-type connectors

- four amplifier inputs (from sensor)
- four outputs
- select non-inverted, grounded, or inverted output with an internal switch for each channel

Performance

Transimpedance gain

- 7,600 V/A inverting or non-inverting

Input Characteristics

- $Z_{in} = 50 \Omega$, max $I_{in} = 100 \mu A$

Output Characteristics

- max $V_{out} = 5 V$ (10 V pp)

Bandwidth

- 2 Hz to 200 kHz (f_{3dB})

Installation Requirements

Dimensions

- approx. 9" x 8.5" x 3" (W x D x H)

Weight

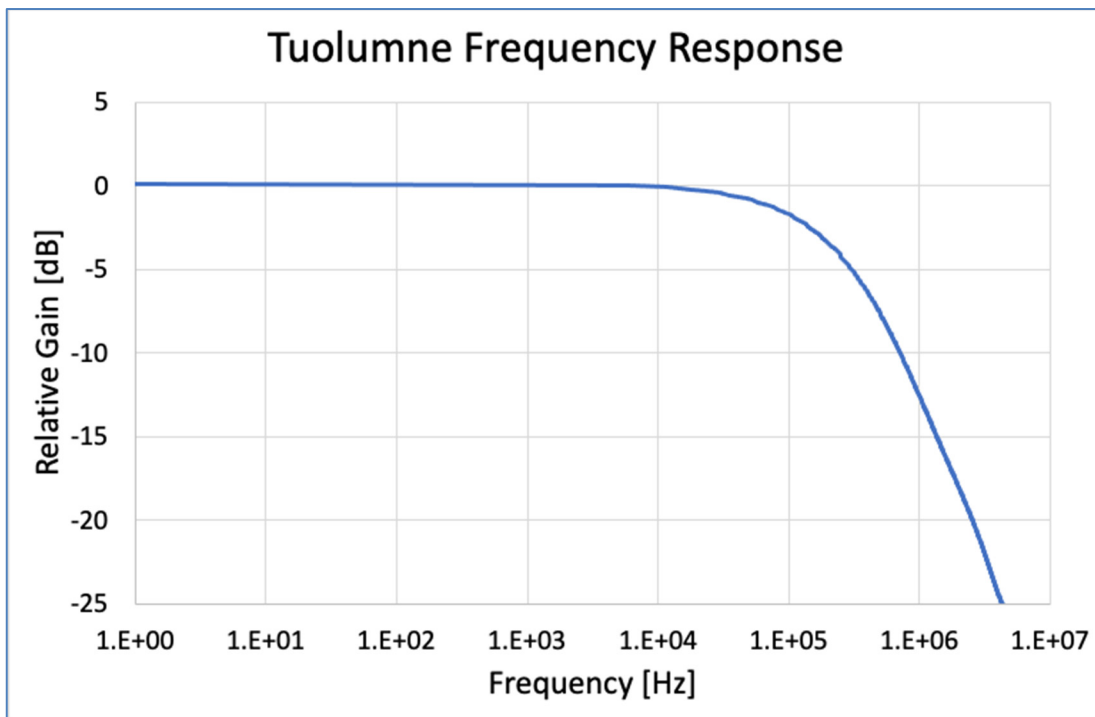
- 900 g (2 lbs.)

Environmental

- 15°C—30°C, 60% RH

Power

- 12 VDC, 1 A
- 120–240 VAC, 50/60 Hz DC adapter included



Frequency response of the Tuolumne amplifiers

