



# 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 **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** 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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### 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

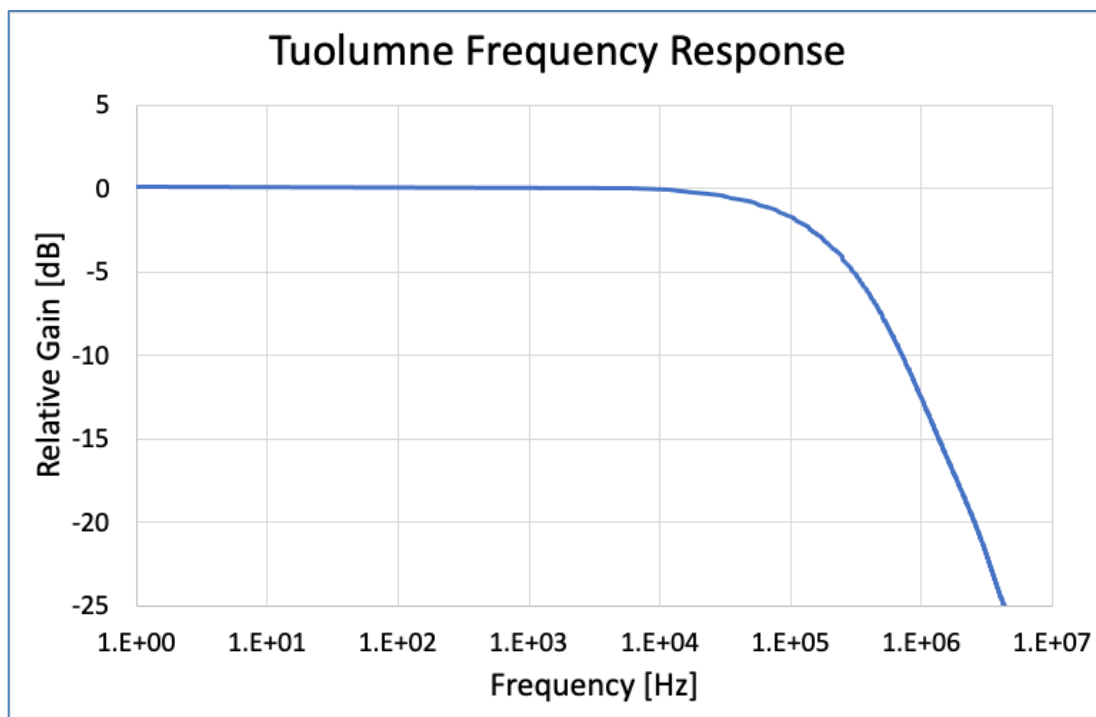
- 900 g (2 lbs.)

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

