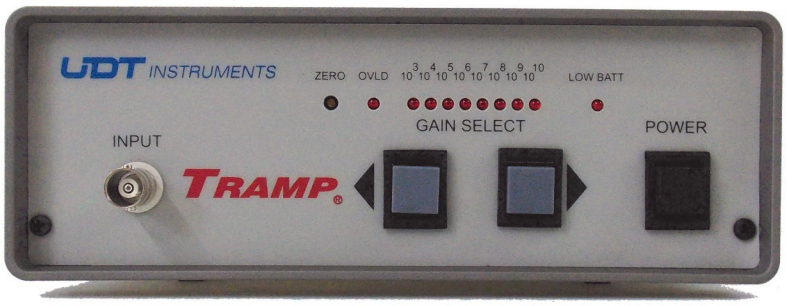
TRAMP Transimpedance Amplifier



GAMMA SCIENTIFIC
Light Measurement Solutions

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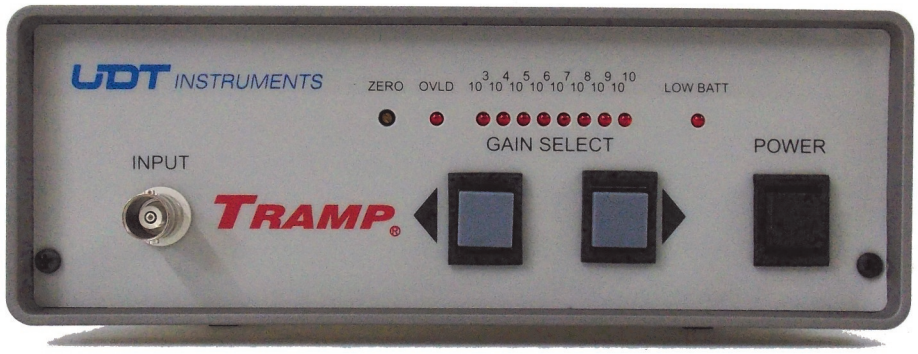

The UDT Instruments TRAMP is a transimpedance amplifier (current-to-voltage) instrument which provides a low input impedance to accurately measure the short circuit current of phototransducers such as silicon and germanium photodetectors, vacuum photodiodes and photomultiplier tubes.

The TRAMP has been specifically designed as a low cost, lab quality instrument to interface silicon photodiodes to a variety of measurement equipment.

This model provides multiple gain selection and utilizes a common BNC connector for input and output connections for user convenience.

A voltmeter, oscilloscope, chart recorder or any other voltage sensitive instrument may be used to monitor the amplifier output.

About Gamma Scientific

With over 50 years of experience in developing light measurement instruments, Gamma Scientific is trusted by the world's leading organizations to provide accurate results.

Based in San Diego, Gamma Scientific manufactures laboratory grade spectroradiometers, spectrometers, spectrophotometers and integrating spheres.

Gamma Scientific also operates an ISO 17025, NVLAP accredited laboratory performing ENERGY STAR, LM-79 and LM-80 tests for LEDs.

About UDT Instruments

UDT Instruments, a Gamma Scientific company, manufactures precision photometers, radiometers, colorimeters and photosensors for optical measurement applications.

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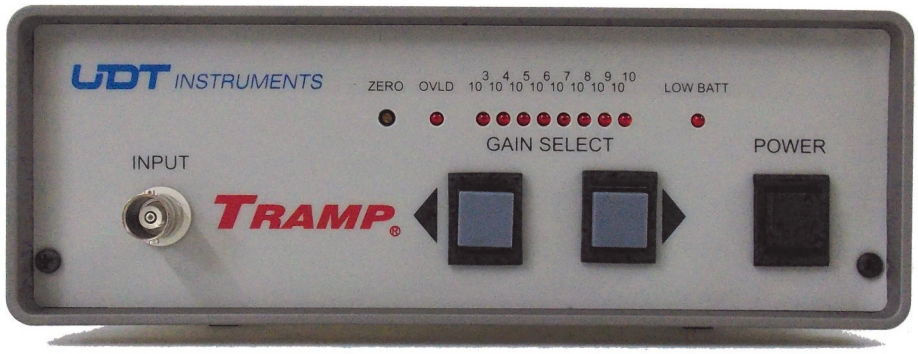

Features

- Very low noise
- Eight decades of gain ranging between 10^3 and 10^{10} (ohms)
- Remote computer control using data acquisition interface (digital input/output, analog output)
- Integral NiCad battery pack with normal and trickle charge modes
- Line powered operation using transformer supplied
- Output scaling to interface to chart recorders and other equipment
- Optimal measurement range indicator

Applications

- Laboratory research
- OEM manufacturers
- Automatic test equipment
- Laser pulse measurement
- Educational
- Detector interface: any type of photo current producing detector in the photovoltaic mode (silicon, germanium, GaAsP, InGaAs)

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TRAMP Specifications

TRAMP Specifications	
Gain (volt/ampere)	10^3 - 10^{10}
Noise (mV RMS)	0.5
Current Range (amps)	10^{-2} - 10^{-13}
Overall Accuracy	±2%
Bandwidth vs. Gain	10^3 @ 160 kHz
	10^4 @ 45 kHz
	10^5 @ 12 kHz
	10^6 @ 12 Hz
	10^7 @ 550 Hz
	10^8 @ 550 Hz
	10^9 @ 5 Hz
	10^{10} @ 5 Hz
Offset Drift vs. Temperature	Less than 50 µV/°C
Input Impedance	0.001 ohms typical
Output Impedance	Less than 1 ohm
Output Voltage	±5V
Power Supply	115/230 VAC
Battery Life	15 hours
Type	10 AA NiCad
Physical Dimensions	2.76"H x 5.91"W x 7.51"L