

UDT Tramp Transimpedance Amplifier



The UDT Instruments TRAMP is a transimpedance amplifier (current-to-voltage) instrument that provides a low input impedance to accurately measure the short circuit current of photo transducers 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.

Ultra-low-Noise Solution With Precision and Affordability

- Eight decades of gain ranging between 10^3 and 10^{10}
- Remote computer control using data acquisition interface
- Integral NiCad battery pack with normal & trickle charge modes
- Line powered operation using supplied transformer
- Output scaling to interface to chart recorders and other equipment
- Optimal measurement range indicator

Key Applications

Laboratory Research	✓
Production Line Integration	✓
Automatic Test Equipment	✓
Laser Pulse Measurement	✓
Compatible with any photo current producing detector in photovoltaic mode (silicon, germanium, GaAsP, InGaAs)	

In addition to our exceptional technical and functional capabilities, Gamma Scientific is ISO/IEC 17025 accredited by NVLAP (NVLAP lab code 200823-0).

System Part Number U21-00-083

UDT Tramp General Specifications	
Gain (Volt / Ampere)	10^3 to 10^{10}
Noise (rms)	0.5 mV
Current Range	10^{-2} to 10^{-13} Amps
Overall Accuracy	$\pm 2\%$
Bandwidth vs Gain	10^3 @ 160 kHz 10^4 @ 45 kHz 10^5 @ 12 kHz 10^6 @ 12 kHz 10^7 @ 550 Hz 10^8 @ 550 Hz 10^9 @ 5 Hz 10^{10} @ 5 Hz
Offset Drift vs Temperature	$< 50 \mu\text{V} / ^\circ\text{C}$
Input Impedance	$< 1 \Omega$
Output Voltage	$\pm 5 \text{ V}$
Input Power	115 / 230 VAC
Battery Information	10 Each, AA NiCad Typical operating time of 15 hours
Dimensions	70 mm (2.8 in) H x 150 mm (5.9 in) W x 191 mm (7.5 in) D
Calibration Traceability	Traceable to NIST with optional ISO/IEC 17025 accredited
Relative Humidity	Up to 99% (non-condensing)
Regulatory Compliance	TUV, UL, CSA, CE

Specifications are subject to change without notice.

Rear Panel

