



## TIA-1200 O/E Converter Optical Oscilloscope Probe

The TIA-1200 Optical to Electrical Converter is a convenient battery powered wide-band detection system for fiber optic applications. With a typical bandwidth of DC to 12 GHz (min 10 GHz), it accurately provides an electrical replica of the optical signal presented to it. It is intended to drive a 50 ohm cable terminated in its characteristic impedance.

The unit is equipped with an InGaAs/InP detector that is responsive in the wavelength range of 900 - 1700 nm. The TIA-1200 is provided with an FC fiber optic receptacle. Other fiber optic connectors can be provided on request. The output signal is presented to a type K SMA female connector.

Each unit is powered by a self-contained 9 V lithium battery. It is employed to provide reverse bias for the detector. Battery operation eliminates ground loops and the undesirable effects of conducted radiation that may exist on local power lines.

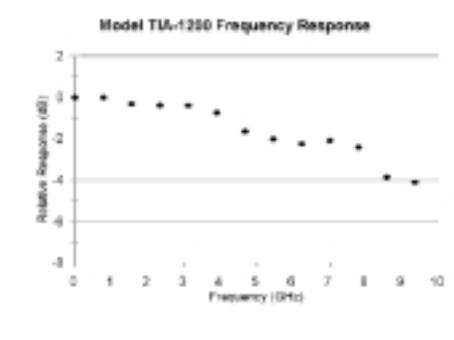
The TIA-1200 is comprised of a fiber coupled InGaAs detector coupled with a reverse bias voltage network. The output of the diode is brought out to a type K female SMA connector. Light falling on the detector generates a positive-going proportional current. This current, multiplied by the load impedance produces a voltage that is proportional to the light incident on the detector surface.

The active area of the TIA-1200 is 50 microns in diameter. It is coupled to a 50 micron core optical fiber. Thus both singlemode and multimode sources may be tested without incurring excessive coupling losses.

Typical optical return loss is 35 dB and is caused primarily by the FC/PC connector employed. If higher return loss is needed, The unit may be optionally equipped with singlemode angled PC connectors for ORLs of around 52 dB..

Battery life is approximately 100 hours and is somewhat dependent on the average strength of the signal being monitored. Battery replacement is indicated when the Power On LED dims noticeably or when the received signal bandwidth appears to be reduced. (See "Operating Manual" concerning battery replacement.). An external power supply is available for an additional cost which eliminates the use of a battery

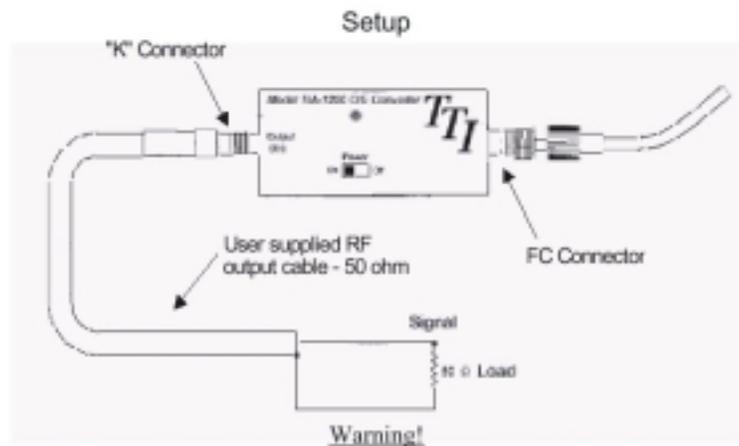
See reverse for additional specifications and details.



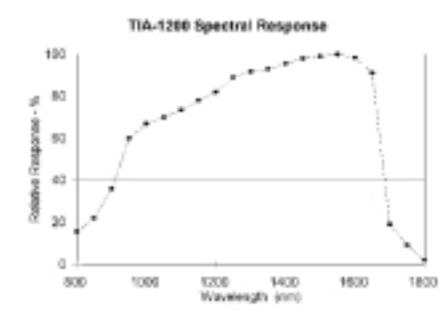
## Specifications

Detector Type .....	InGaAs/InP(900-1700nm)
Current responsivity.....	0.7 A/W @ 1300 nm, 0.77 A/W @ 1550 nm
Maximum Linear Input Power.....	10 mW Max
Input Without Damage.....	100 mW
Bandwidth (-3dB).....	DC to 12 GHz typical, 10 GHz min.
Output Impedance.....	Terminate in 50 Ohms
Output Connector.....	Type K SMA female
Fiber Optic Input Connector.....	FC
Input Numerical Aperture.....	0.23
Optical Return Loss.....	>35 dB, >52 dB with APC connector
Power Required.....	9 V Lithium Battery powers the unit for approximately 100 hrs
Dimensions.....	1.2" W, 2.5" L, 1.5" H, (30.5 mm, 63 mm, 38 mm)
Weight .....	5 oz, 150 g
Operating Temperature.....	0 - 40 C
Limited Warranty.....	2 Years from date of receipt

Note: The TIA-1200 is unamplified.



*No voltage should be present at user interface or damage to the unit may occur.*



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