

# Optical to Electrical Converter

TIA-3000

## Features:

- Wavelength Response 900nm - 1700nm
- Low Noise, High Gain
- Responsivity 450V/W
- Bandwidth- 11 GHz (SM)
- Type K SMA Output Electrical Connector
- FC/UPC Style Fiber Optic Input Connector

The TIA-3000 is a versatile Optical to Electrical converter for laboratory or field use. This low profile O/E converter will faithfully reproduce an optical signal on a wide range of oscilloscopes and digitizers.

The unit is equipped with an InGaAs/InP detector that is responsive in the wavelength range of 900 - 1700 nm. The TIA-3000 bandwidth ranges from 30KHz to 10GHz (-3dB).



## Applications:

- General Laboratory Testing of Optical Components
- Front-End O/E Converter For Test Instruments
- Rapid Doppler-Shift LIDAR Measurements
- Analog RF Links Over Fiber



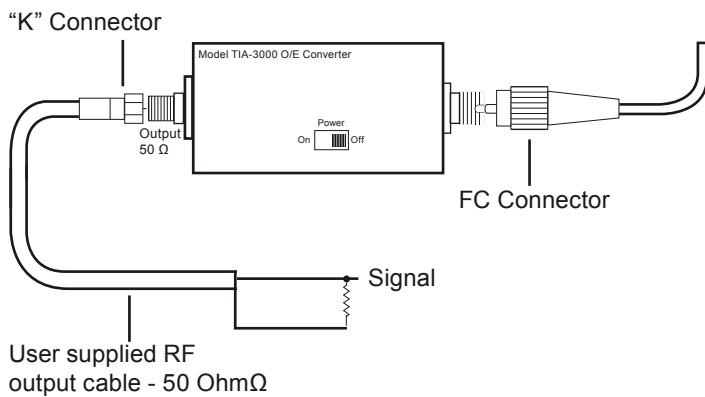
Applications for this converter include the General purpose testing of fiber optic components, data links and transmitter testing, LIDAR and analog RF-over-fiber links.

The TIA-3000 like other TIA O/E devices are shipped in a hard case with universal power supply that has interchangeable AC plugs.

## TIA-3000 Specifications

|                                |                                                                     |
|--------------------------------|---------------------------------------------------------------------|
| Detector Type                  | InGaAs/InP (900nm-1700nm)                                           |
| Current Responsivity           | 0.8 A/W @ 1550nm Typical                                            |
| Maximum Linear Input Power     | 2mw                                                                 |
| Maximum Input Power w/o Damage | 3mw                                                                 |
| Bandwidth@1550nm Typ.          | 11 GHz typ. (8.5 GHz min.)                                          |
| Output Impedance               | 50 Ohms                                                             |
| Output Connector               | Type K SMA Female                                                   |
| Fiber Optic Input Connector    | FC/UPC                                                              |
| Input Numerical Aperture       | 0.11                                                                |
| Sensitivity                    | -20dBm @ 10 <sup>-10</sup> BER                                      |
| Detector ORL @1550nm Typ.      | 30dB                                                                |
| Power                          | Universal Power Supply                                              |
| Dimensions                     | 1.2"W x 2.5"L x 1.3"H ( 30.5mm x 63mm x 33mm)                       |
| Weight                         | 5.6 oz (0.16 Kg)                                                    |
| LED Annunciators Provided      | Power On                                                            |
| Operating Temperature Range    | 0 - 40 C                                                            |
| Standard Warranty              | Two Years, Component and Workmanship, 30 Day Satisfaction Guarantee |
| Accessories Supplied           | Transit/Storage Case, Operating Manual, Universal Power Supply      |

### Typical Setup of the TIA-3000



TIA-3000 Spectral Response

