

## WARRANTY

All fiber optic transmission systems, products and accessories manufactured by Liteway, Inc. and its subsidiaries are fully tested prior to shipment and are warranted against defective materials and workmanship for a period of five full years from the date of the original shipment. Should a problem occur, a Return Material Authorization Number (RMA) must be obtained from Liteway Inc. at (516) 931-2800 and the item returned to Liteway, Inc. 166 Haverford Road, Hicksville, NY 11801, USA, prepaid. Liteway Inc. will then, at its option repair or replace the defective item.

Liteway, Inc. maximum liability under this warranty is limited to the cost of the defective item only. No contingent liabilities of any kind are either assumed or implied.

Any items returned to Liteway, Inc. that have been misused, abused, damaged, modified, connected or adjusted in any way contrary to the instructions furnished by Liteway, Inc. or repaired by unauthorized personnel will not be covered by this warranty. Any non-warranty repairs required will be quoted at the current rate for such services.



### Important Notices



#### **CAUTION ! AVOID DIRECT EXPOSURE TO BEAM.**

All -5, -7, -8, and -9 Models use laser diodes. These solid-state laser diodes are located in the optical ports of these units. Laser diodes produce invisible radiation that may be harmful to human eyes. Never look directly into the optical port of any fiber optic unit designed to operate with single-mode optical fiber.

#### **NOT FOR LIFE SUPPORT SYSTEMS**

Liteway, Inc. does not authorize or warrant any of its products or accessories for use in critical life support systems or applications of any kind.

## Operating Instructions

### **LuxLink®** **Fiber Optic Analog** **Transmission System**

**Models;**  
**INST-1401**  
**INSR-1401**

The **LuxLink®** INST/INSR-1401 is an analog fiber optic transmission system designed for the transmission of SATCOM type IF signals in a variety of applications.



### Technical Specifications

System Bandwidth (+0.5dB)	70 MHz (+ 20 MHz) 140 MHz (+ 20 MHz)
Input/Output Impedance	50 ohms
Input / Output Level	-7 dBm to -30 dBm
Signal/Noise	40 dB min @ 1 dB optical loss
Link Gain	0 dB +5 dB (Adjustable)
Operating Wavelength	1310nm or 1550 nm
Optical Output Power	-5 dBm typical
Optical Loss Budget	1 dB for 40 dB SNR
Optical Connectors	FC / PC
Electrical Signal Connector	BNC
Temperature Range	-35° to +75°C
Power Requirements	11-24 VAC/DC @250 mA
Physical Size (mm)	5.0" (127) x 3.0" (76) x 1.0" (25.4)

All specifications are subject to change without prior notice.

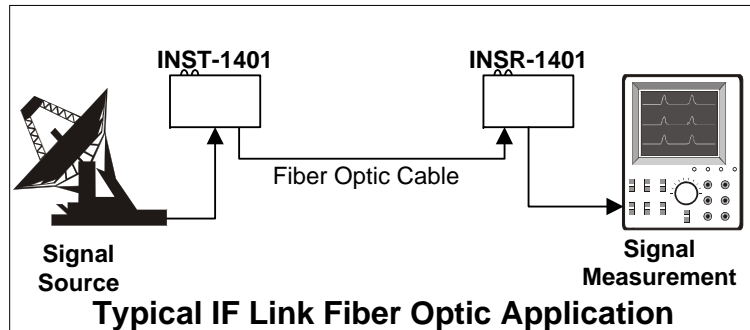
# Installation Instructions

The **LuxLink®** INST/INSR-1401 system consists of the INST-1401 transmitter and INSR-1401 receiver. The system utilizes linear intensity modulation to transmit SATCOM and similar microwave IF signals over distances of several miles. The system being completely analog prevents any digital artifacts.

The system operates with standard single-mode optical fiber. For convenience a front panel gain adjustment is provided. Integral indicators on both units continuously indicate the presence of repetitive signals as well as the presence of operating power making system troubleshooting simple.

Although specifically intended for standard 70 and 140 MHz IF frequencies the INST/INSR-1401 system will operate from 50 MHz to 180 MHz.

To maintain the wide-band characteristics of the system be certain to use 50 ohm coaxial cable for all signal connections. The INST-1401 has an internal 50 ohm termination while the INSR-1401 is back-terminated in 50 ohms and operates with a 50 ohm load..



## Indicator Lights

Indicator	Lights when
Pwr (green)	Proper operating power is present.
Alrm (red)	The loss of signal alarm is activated and there is no analog signal present. This feature may also not operate properly with all types of signals.
Tx or Rx (green)	A continuous analog signal is present. This indicator may not trigger on all signals

The **Alarm** switch is used to turn the alarm function on and off.

## Power Terminal Block Connections

Pin	Function
1	Alarm output for use with optional Alarm Sensing Unit ALM-1000. No other connections should be made to this terminal
2	11 to 24 Volts AC/DC @ 250 mA
3	AC or DC return (Common to Housing)

Be certain to check all connections, settings and voltages before applying power

These units may be used stand-alone or in an RMP-series rack mounting plate. They may also be DIN rail mounted with a DIN-1000 DIN rail adapter.