

# 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 two 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

## Fiber Optic DC Time Code Transmission System

### Models;

**IRGT-7001**

**IRGR-7001**

**IRGM-7004**

**IRGP-7001**



The IRGT / IRGR-7001 system consists of the IRGT-7001 transmitter and IRGR-7001 receiver and will transmit DC coupled TTL encoded time code signals in accordance with conventional IRIG derived practices. The IRGM-7004 is a transmitter with 4 optical outputs. The IRGP-7001 is an optical repeat, that can be used as drop-and-repeat.

### Technical Specifications

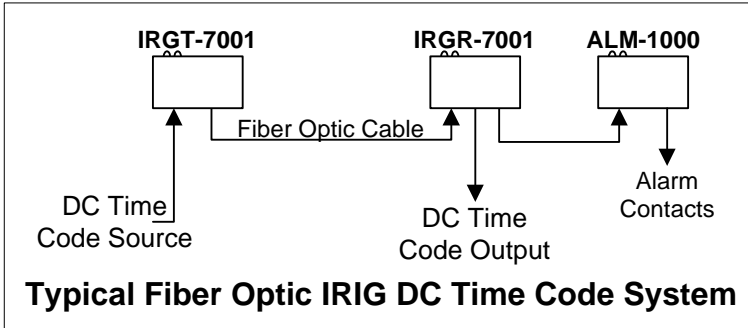
Data Rate	1 pulse/sec to 10,000 pulse/sec
Protocols	IRIG A, B, D, E, or G, all DCLS
In / Out Impedance	50 ohms
In / Out Signal Level	3.5 volts typical (TTL) (40 mA max)
Rise / Fall Time	20 nsec typical
Bit Error Rate	10E9 minimum
Signal Connectors	BNC
Operating Wavelength	850 (-1), 1300 (-3,-7), 1550 (-9)
Optical Output	-15 dBm typical
Optical Loss Budget	0 – 12 dB
Optical Connectors	ST (multimode), FCPC (single-mode)
Fibers Type	Multi-mode (-1,-3), Single-mode (-7,-9)
Temperature Range	-35° to +75°C
Power Requirements	11-24 VAC/DC @ 150 mA
Physical Size (mm)	5.0"(127)L x 1.0" (25.4)W x 3.0"(7)D

All specifications measured with 1Km of 62.5u multimode fiber.

All specifications are subject to change without prior notice.

# Installation Instructions

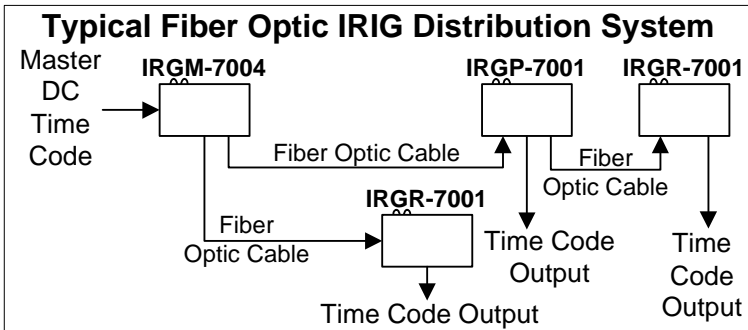
The diagram below shows the typical installation of the IRGT-7001 and IRGR-7001 fiber optic DC Time Code transmission units.



Both should be connected as shown and a DC time code signal applied to the transmitter. The receiver will reproduce this signal with no adjustments.

For best results it is important that properly terminated 50 ohm coaxial cables be used or rise and fall times will be affected.

The diagram below shows the typical installation using the IRGM-7004, and IRGP-7001 for IRIG time code distribution



## 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 DC or AC Volts input
3	AC or DC return (Common to Housing)

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

## Indicator Lights

Indicator	Lights when
Pwr	Proper power is present.
Alrm	The loss of signal alarm is activated when there are no time code signals present
Sig	A time code signal is being transmitted or received.