

# Microwave Photonic Systems, Inc. 888-868-8967



## OFW-3427 L-Band Fiber Optic Interfacility Link (IFL) System

### Applications

**Wideband RF Transmission**

**Antenna Remoting**

**Trunking Radio**

**L-Band SATCOM**

**GPS/ Wireless/ PCS**

### Features

**CWDM Compatible**

**Wide Bandwidth, 800 MHz to 2250 MHz**

**High Dynamic Range**

**Low Noise RF Front-end**

**LNB Powering (opt)**

**80 km Extended Range (opt)**

**RS-232 or RS-485 Data Port (opt)**

**1 Year Full, 2 Year Limited Warranty**

The OFW-3427 L-Band Fiber Optic IFL System is the principle hardware for long-haul transmission of RF signals in the frequency range of 800 MHz to 2250 MHz over singlemode fiber optic cable. The standard transmitter and receiver configuration provides transmission distances up to 50 km. An optional extended-range configuration can be specified that increases the link range to 80 km. The system's optical conversion process is functionally independent of the RF carrier's data modulation format. The links have low noise and high dynamic range characteristics, a wide operating temperature range and provide turnkey installation.

The system provides status monitoring through the use of an onboard processor that communicates with a host computer over a RS-232 I/O interface. The I/O parameters include laser bias current, optical receive power, internal temperature and alarm monitoring. In addition, an optional integrated Bias-T for LNB powering may be specified. The OFW-3427 provides a high-performance, cost-effective solution for transporting L-Band signals over single mode fiber.

### Specifications

#### Optical/Electrical

I/O Impedance	75 ohm (F Conn version) or 50 ohm (SMA Conn version)
Carrier-to-Noise Ratio*	40.0 dB @ RF Input Level = 10 dBmV 50.0 dB @ RF Input Level = 20 dBmV
Carrier-to-Noise Ratio**	25.0 dB @ RF Input Level = 10 dBmV 38.0 dB @ RF Input Level = 20 dBmV
Link RF Gain (@0 dB Opt. Loss)	21.0 dB (min)
Link RF Gain (@12 dB Opt. Loss)	1.0 dB (min)
RF Gain Variation Over Temp.	±2.0 dB
Composite 1 dB Compression Point	+34.0 dBmV
Second Order Intercept Point (IP2)	+50.0 dBmV @ 0.0 dB Optical Loss
Second Order Intercept Point (IP2)	+57.0 dBmV @ -12 dB Optical Loss
Third Order Intercept Point (IP3)	+48.0 dBmV
Noise Figure (@ 0 dB Opt. Loss)	15.0 dB @ 0dB Opt. Loss, 27 MHz BW
Noise Figure (@ 12 dB Opt. Loss)	32.0 dB @ 12dB Opt. Loss, 27 MHz BW

#### General

Power Supply, AC Autoranging	85 VAC -264 VAC, 47 Hz to 440 Hz, Single Phase
Power Supply, DC Autoranging (opt)	-48 VDC to +48 VDC
AC Receptacle	IEC 320
Optical Input	FC/APC, SC/APC, AVIM APC or User Specified
RF Output Connector	SMA(f), 50 ohm or F(f), 75 ohm
Storage Temperature	-40°C to +85°C
Operating Temperature	-40°C to +71°C
Local Alarm	LED: Optical Power Failure, LED: Line Power On
Optical Power Monitor	1 V/mW +/- 10%
Remote Alarms	Open Collector & RS-232 Interface or RS-485
Dimensions	19"(w) x 14"(l) x 1.75"(h)



www.b2bphotonics.com  
**Microwave Photonic Systems, Inc.**  
 882 South Matlack St., Unit 104  
 West Chester, PA 19382

Toll Free: 888-868-8967  
 Phone: 610-344-7676  
 Fax: 610-344-7110  
 e-mail: info@b2bphotonics.com