

Microwave Photonic Systems, Inc. 888-868-8967



OFW-400 Intermediate Frequency(IF) Fiber Optic Interfacility Link(IFL) System

Applications

- CATV Return Path Link**
- Interfacility Link Remoting**
- Frequency Reference Distribution**
- SATCOM Uplink & Downlink Remoting**
- IF Distribution, 70 MHz/140 MHz**
- HF & VHF Signal Transmission**

Features

- CWDM Compatible**
- Wide Bandwidth, 5 MHz - 500 MHz**
- High Dynamic Range**
- Low Noise RF Front-end (opt)**
- 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-400 Intermediate Frequency (IF) Fiber Optic Interfacility Link (IFL) System is the principle hardware for long-haul transmission of IF signals in the frequency range of 5 MHz to 300 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 IF 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 Low Noise Amplifier (LNA) or integrated Bias-T for remote LNA powering may be specified. Also, the system may be specified with an extended frequency range of 5 MHz to 500 MHz. Finally, the OFW-400 when specified with the 75 ohm input/output impedance option provides a high-performance, cost-effective solution for CATV Return Path signal distribution in Hybrid Fiber/Coax Networks.

Specifications

Optical

Operating Wavelength	1310 nm \pm 2 nm, 1550 nm \pm 2 nm or CWDM Bands
Laser Diode	Class 3A
Output Power	+3 dBm \pm 0.5 dBm
Allowed Backreflection (max)	36 dB @ full specs
E/O Diff. Eff. (min)	0.06 W/A

RF Channel

Modulation Bandwidth	5.0 MHz to 300.0 MHz
	5.0 MHz to 500.0 MHz (opt)
Flatness (max)	\pm 1.0 dB
VSWR (max)	2.0:1
1 dB Comp. Level (min)	20.0 dBm ⁽¹⁾
Input IP-3 Min @ 2x+3 dBm	34.0 dBm ⁽¹⁾
Input Damage Level	+27.0 dBm ⁽¹⁾
RF Link Gain (typ)	+0.0 dB @ 1.0 dB Optical Loss ⁽¹⁾
Noise Figure (max)	35 dB @ 1.0 dB Optical Loss ⁽¹⁾

Note (1): Overall link performance as measured from transmitter IF Input to receiver IF Output.

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



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