Sat-Light Gold Series

GL7230 L-Band Optical Uplink

Features & Benefits

- Optimized for Professional Satellite and Wireless Applications
- High Input Power (-10 to -30dBm)
- 10Km Transmission Distance
- Selectable AGC/MGC
- Front Panel Test Port
- Selectable LNB Powering
- Powerful Monitoring Features
- Compatible with all 1st Generation Sat-Light Products

Product Description

Global Foxcom's Sat-Light/Gold L-Band Interfacility Link offers a high performance, cost effective alternative to conventional coaxial-cabled systems. Sat-Light/Gold L-Band IFL covers the range of 950 to 2200MHz. The Gold Series L-Band link is designed for a wide range of satellite UL (Uplinking) facilities whereby high input power levels are required. Global Foxcom's high dynamic range DFB laser delivers exceptional signal quality for the most demanding applications.

The new Sat-Light Gold series is compatible with first generation Sat-Light 7000 Series platform. The Gold Series support L-Band, 70/140MHz IF, Wideband (10-2200 MHz), 10MHz Reference, Redundancy, M & C, SNMP, Ethernet, and Serial Data Communication.

The link consists of a high input power optical transmitter, which receives the RF signal from an L-band modem, and an optical receiver that connects to the antenna BUC. All satellite modulation schemes are accommodated – digital or analog. Inherently low phase is achieved by direct modulation of the laser diode.

Specifications

GL7230 L-Band Optical Uplink [950-2200MHz], 4dB Optical Budget

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range	MHz	950-2200MHz		
Link Gain	dB	Adjustable	-10	+10
Amplitude Response @ Unity Gain 950-2200MHz any 36 MHz	dB	 ±.2 ±0.25		 ±2.2 ±0.3
Gain Stability @ Constant Temp	dB/24hr	±0.25		±0.3
SFDR[1]	dB/Hz[2/3]	103	100	
CNR [any 36 MHz][1]	dB	54	52	
Noise Figure (NF)[2]	dB	18		21
Output IP3 (OIP3)[3]	dB		+15	
Third Order Inter-Modulation [IMD][4]	dBc	Adjustable	55	40
Group Delay Variation- linear: 950-2200MHz	ns	4		5
Input Signal Range – Total Power	dBm		-30	-5
RF Output Signal Range – Total Power	dBm		-25	0
Maximum Input without damage	dBm		+15	
Input/Output Impedance (75 or 50)	Ohm			
TX/RX Input/Output VSWR 50 Ohm 75 Ohm	dB	 -14 -12		 -14 -12
RF Connector Type: Input/Output Test Port		F, SMA BNC		
Test Port [front panel sample port]	dB	-20	-22	-18
LNB Voltage[5]	Volts	On/Off	13	18
Optical Specifications	**Units**	**Typical**	**Minimum**	**Maximum**
Optical Power Output	dBm	3	1	4
Optical Budget / Distance	dB/Km	1310nm | 1550nm / 8dB |15Km		
Optical Connector Types		FC/APC or SC/APC		
Optical Wavelength	nm	1310/1550/CWDM		
Electrical Specifications	**Units**	**Typical**	**Minimum**	**Maximum**
Supply Voltage	Vdc	13	12.7	18
Supply Current [TX][6]	Amps	0.4		
Supply Current (RX)	Amps	0.3		
Physical Specifications	**Units**	**Typical**	**Minimum**	**Maximum**
Operating Temperature Range			-10	+55
Dimensions [D×W×H]		RX: 5” x 5” x 1.5” | TX: 5” x 5” x 3”		
MTBF	Hours	RX: 359,057 | TX: 309, 481		

1. 0dBm RF input, unity gain, IMD=-40 dBc @ 1 meter fiber	5. LNB Maximum current: 300 mA
2. -25dBm RF In, 20dB Gain, IMD=-40dBc	6. Under 10ºC add 120 mA [laser heating]
3. 0dBm RF Output, IMD=-40dBc	
4. User adjustable	

Ordering Information

GL7230T – Gold L-Band Uplink Transmitter
GL7230R – Gold L-Band Uplink Receiver