



## 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
- Powerful Monitoring Features
- Compatible with all 1st Generation Sat-Light Products

#### Product Description

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. 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	dB/24hr	±0.25		±0.3
SFDR1	dB/Hz <sup>2/3</sup>	103	100	
CNR [any 36 MHz] <sup>1</sup>	dB	54	52	
Noise Figure (NF) <sup>2</sup>	dB	18		21
Output IP3 (OIP3) <sup>3</sup>	dBm		+15	
Third Order InterModulation [IMD] <sup>4</sup>	dBc	Adjustable	55	40
Group Delay Variation- linear 950 - 2200MHz	ns	4		5
Input Signal Range - Total Power	dBm		-30	-5
Output Signal Range - Total Power	dBm		-25	0
Maximum Input without Damage	dBm		+15	
Input/Output Impedance	75 or 50			
TX/RX Input/Output return loss 50 Ohm 75 Ohm	dB	-14 -12		-14 -12
RF Connector Type Input/Output		F, SMA		
Test Port		BNC		
Test Port [front panel sample port]	dB	-20	-22	-18
Optical Specifications	Unit	Typical	Minimum	Maximum
Optical Power Output	dBm	3	1	4
Optical Budget / Distance 4 dB optical budget	dB/Km	1310 nm   1550 nm 8   15		
Optical Connector Types		FC/APC or SC/APC		
Optical Wavelength	nm	1310/1550/CWDM		
Electrical Specification				
Supply Voltage	Vdc	13	12.7	18
Supply Current [TX] <sup>5</sup>	Amps	0.4		
Supply Current (RX)	Amps	0.3		
Physical Specifications				
Operating Temperature Range			-10	+55
Dimensions [D×W×H]				
MTBF	Hours	TX: 309,481 RX: 359,057		

1. 0dBm RF input, unity gain, IMD=-40 dBc @ 1 meter fiber	4. User adjustable
2. -25dBm RF Output, IMD=-40dBc	5. Under 10°C add 120 mA [laser heating]
3. 0dBm RF Output, IMD=-40dBc	

Ordering Information
GL7230-T – Gold L-Band Uplink Transmitter
GL7230-R – Gold L-Band Uplink Receiver