global FOXCOM
completing the picture

Sat-Light Gold Series

# GL7240 L-Band Wide Power Optical Downlink


## Features & Benefits

- Wide Input/Output power range suitable for all dish sizes
- Optimized for Professional Satellite and Wireless Applications
- 10Km Transmission Distance
- Selectable VAR/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. The 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 power levels. Global Foxcom's high dynamic range DFB laser delivers exceptional signal quality for the most demanding applications.

The 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 an optical transmitter, which receives the RF signal from an LNB or LNA, and an optical receiver that connects to the indoor receiver equipment. All satellite modulation schemes are accommodated – digital or analog. Inherently low phase is achieved by direct modulation of the laser diode.

## Specifications

**GL7240 L-Band Wide Power Optical Downlink [950-2200MHz], 4dB Optical Budget**

| RF Specifications | Units | Typical | Minimum | Maximum |
|---|---|---|---|---|
| Frequency Range | MHz | 950-2200 MHz | | |
| Link Gain | dB | Adjustable | -10 | +10 |
| Amplitude Response @ Unity Gain<br>2200MHz<br>and 48 MHz | dB | <br>±2<br>±0.25 | | <br>±2.2<br>±0.3 |
| Gain Stability @ Constant Temp | dB/24hr | ±0.25 | | ±0.3 |
| SFDR[1] | dB/Hz[2/3] | 103 | 100 | |
| CNR [1] | dB | 60 | 55 | |
| Noise Figure (NF) [1] | dB | 18 | | 21 |
| Output IP3 (OIP3) [2] | dB | +5 | | |
| Third Order Inter-Modulation [IMD] | dBc | Adjustable | 55 | 30 |
| Group Delay Variation- linear: 2200MHz | ns | 4 | | 5 |
| Input Signal Range – Total Power | dBm | | -40 | -5 |
| RF Output Signal Range – Total Power | dBm | | -40 | -5 |
| Maximum Input without damage for 60 sec | dBm | | +15 | |
| Input/Output Impedance | Ohm | 75 or 50 | | |
| TX/RX Input/Output VSWR<br>@50 Ohm<br>@75 Ohm | dB | <br>-14<br>-12 | | <br>-14<br>-12 |
| RF Connector Type: Input/Output<br>Test Port | | F, SMA<br>BNC | | |
| Test Port [front panel sample port] | dB | -20 | -22 | -18 |
| LNB Voltage[4] | Volts | On/Off | 13 | 18 |
| **Optical Specifications** | **Units** | **Typical** | **Minimum** | **Maximum** |
| Optical Power Output | dBm | 3 | 1 | 4 |
| Optical Budget\|Distance//4 dB optical budget | dB/Km | 1310nm \|1550nm// 8\|15Km | | |
| Optical Connector Types | | FC/APC or SC/APC | | |
| Optical Wavelength | nm | 1310nm \|1550nm \| CWDM | | |
| **Electrical Specifications** | **Units** | **Typical** | **Minimum** | **Maximum** |
| Supply Voltage | Vdc | 13 | 12.7 | 18 |
| Supply Current [TX] [5] | Amps | 0.4 | | |
| Supply Current (RX) | Amps | 0.3 | | |
| **Physical Specifications** | **Units** | **Typical** | **Minimum** | **Maximum** |
| Operating Temperature Range | | | -10 | +55 |
| Dimensions [D×W×H] | | 4.8" X 4" X 1.3" | | |
| MTBF | Hours | TX: 309,481 \| RX: 359,057 | | |

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

## Ordering Information

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|---|
| GL7240-T – Gold Wide Power L-Band Downlink Transmitter |
| GL7240-R – Gold Wide Power L-Band Downlink Receiver |

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