50 MHz – 4 GHZ FIBER OPTIC LINK
Laser Lab Center Inc.
LLC FO Link 3

FEATURES

- Bandwidth 50 MHz to 4 GHz
- Hermetical case (IP68)
- No external control circuits required
- Transimpedance amplifier in both transmitter and receiver

APPLICATIONS

- Antenna remoting
- Local oscillator remoting
- Interfacility communication links

ELECTRICAL SPECIFICATIONS					
PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
Operating frequency	± 3 dB bandwidth		300 MHz		3 GHz
Gain	G	dB	0	5	10
Gain flatness	GF	dB	± 2		
Noise figure	NF	dB	5	7	12
Group delay	GD	ns		0.1	0.2
VSWR	Tx Input / Rx output.		2:1		
Phase noise	100 Hz offset	dBc	100		
Input power at 1 dB compression	IP1dB	dBm	0	2	5
Output power at 1 dB compression	OP1dB	dBm			19
Output Third Order Intercept	IIP3	dBm			20
Spurious-free dynamic range	at 3 GHz bandwidth	$dB/Hz^{2/3}$	>100	>110	>120
Maximum input power	No damage	dBm	15		
Maximum output power	Saturated	dBm	15		
RF connectors	SMA(female)				
Impedance	Input/Output	Ohms		50	

OPTICAL PERFORMANCE SPECIFICATIONS					
PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
Fiber optic connectors	FC/APC				
Fiber	Single mode fiber 9/125 µm				
Optical power in fiber	Reference only	mW	3	10	20
Side mode suppression ratio		dB	38	45	52

DC POWER REQUIREMENTS (*)					
PARAMETERS	CURRENT	PIN #	MIN.	TYP.	MAX.
Transmitter with TEC «ON»	0.8 A (max.)	1, 4	12 V		18 V
	GND	2, 3			
Receiver	0.1 A (max.)	1, 4	12 V		18 V
	GND	2, 3			
* Optional DC power 220 V					