

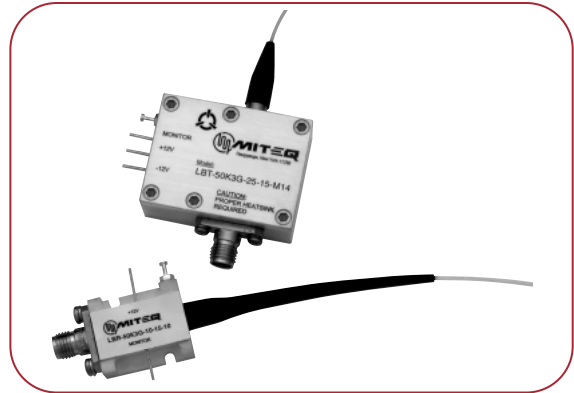
50 kHz - 3 GHz LBL FIBER OPTIC LINK

FEATURES

- Bandwidth..... 50 kHz to 3 GHz
- Small size
- Un-cooled DFB laser
- No external control circuits required
- Transimpedance amplifier in both transmitter and receiver
- Operational status monitor pins

APPLICATIONS

- Antenna remoting
- Local oscillator remoting
- Interfacility communication links



ELECTRICAL SPECIFICATIONS

PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
Operating frequency	3 dB bandwidth		50 kHz		3 GHz
Gain		dB	12	17	22
Noise figure	Above 50 MHz	dB		10	15
Group delay	Peak-to-peak	ns		0.1	0.2
VSWR	Input/output				2:1
Phase noise	100 Hz offset	dBc	100		
Input power at 1 dB compression	Option A	dBm	-14		
Spurious-free dynamic range	1 Hz bandwidth	dB/Hz ^{2/3}	100	106	
Maximum input power	No damage	dBm			+10
Maximum output power	Saturated	dBm			+10
Impedance	Input/output	Ohms		50	
RF connectors	SMA female (male optional)				

NOTE: -30 dBm input power.

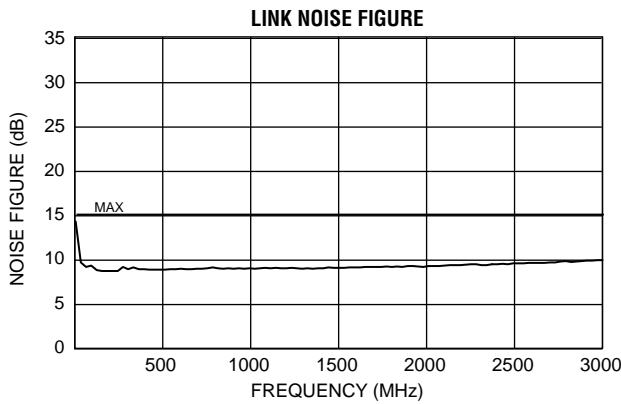
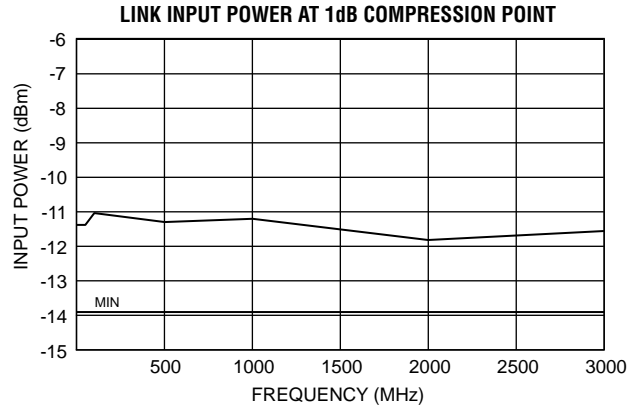
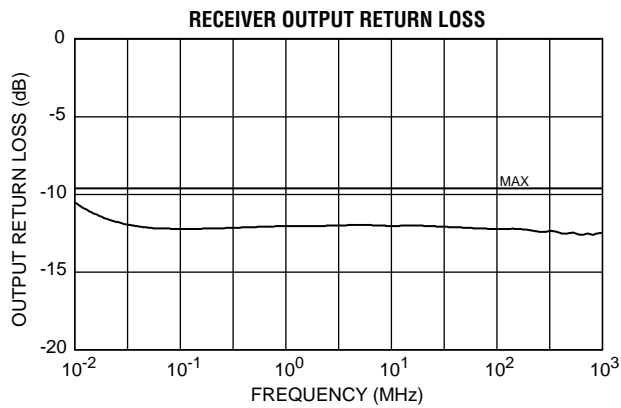
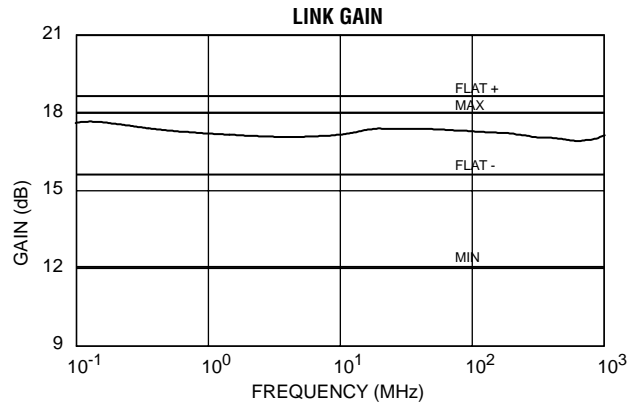
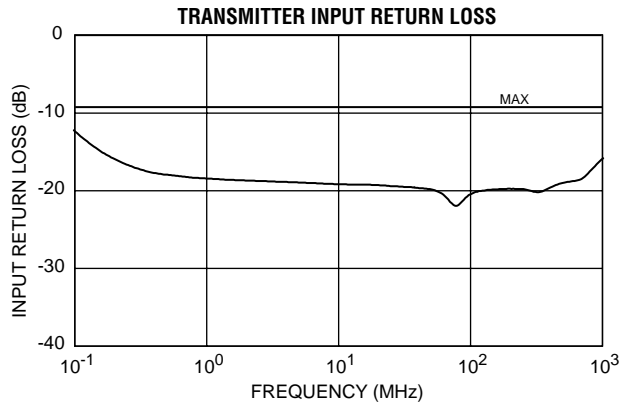
OPTICAL PERFORMANCE SPECIFICATIONS

PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
Fiber optic connectors	FC/APC (Other standard available)				
Fiber	Single mode fiber (9/125μm)				
Wavelength		nm	1540	1550	1560
Spectral width	FWHM	nm			0.1
Optical power in fiber	Reference only	mW	3	4	
Side mode suppression ratio		dB	30	40	

POWER REQUIREMENTS

PARAMETERS	CURRENT @ 25°C BASE PLATE	UNITS	MIN.	TYP.	MAX.
			(VDC)	(VDC)	(VDC)
Transmitter	200 mA	2	+11	+12	+20
	100 mA	1	-11	-12	-20
Receiver	100 mA	4	+11	+12	+20

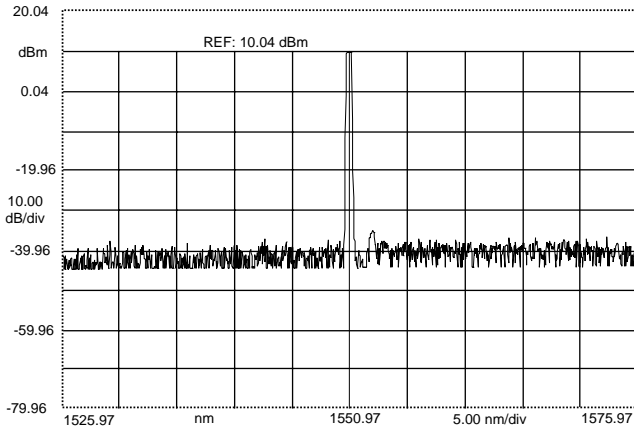
TYPICAL TEST DATA



TYPICAL TEST DATA (CONT.)

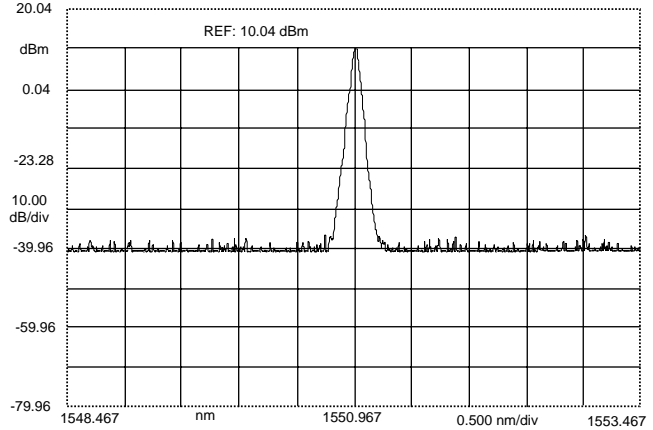
**TRANSMITTER SPECTRUM
50 nM SPAN**

DFB Source Test (TrA)	Stop Band	1.55 nm	Peak Amplitude	9.86 dBm
Peak Wavelength	Center Offset	0.07 nm	Bandwidth	0.55 nm
Mode Offset	SMSR	44.69 dB	at:	-3.00 dB

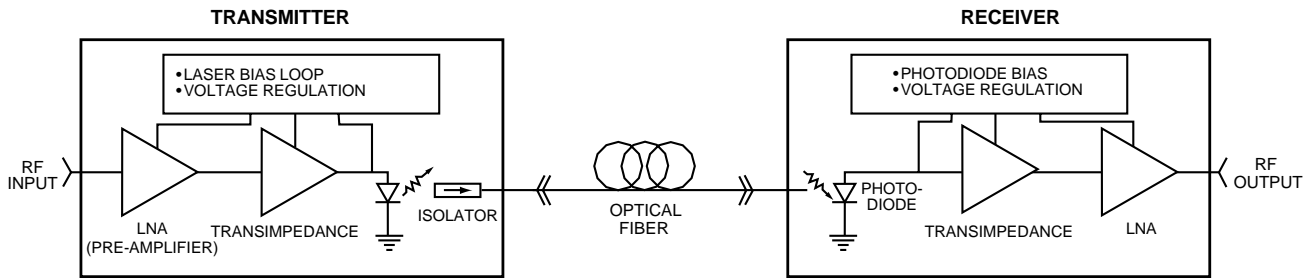


**TRANSMITTER SPECTRUM
5 nM SPAN**

DFB Source Test (TrA)	Stop Band	0.990 nm	Peak Amplitude	9.96 dBm
Peak Wavelength	Center Offset	-0.230 nm	Bandwidth	0.050 nm
Mode Offset	SMSR	46.53 dB	at:	-3.00 dB



BLOCK DIAGRAM



ORDERING INFORMATION

Transmitter..... Part number: LBT-50K-3G-25-15-M14
 Receiver..... Part number: LBR-50K-3G-10-15-10

ENVIRONMENTAL CONDITIONS

Operating temperature -20 to +70°C
 Storage temperature -40 to +85°C
 Humidity 95% relative humidity, noncondensing

