

## 26 GHz fiber optic links

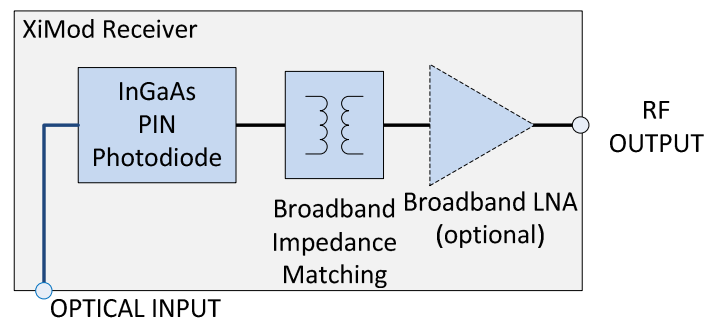
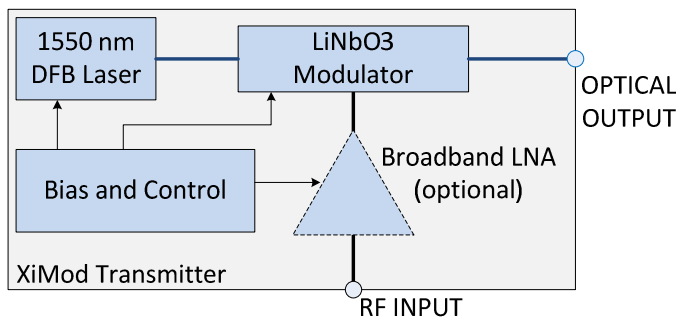
- **Broadband Communications**
- **Antenna Remoting**
- **Sensor Systems**
- **Radar Systems**
- **Low Noise**
- **High Dynamic Range**
- **Pre- and Post-Amplified Options**
- **Wide Temperature Range**

XiMod Transmitters feature a small form factor MZM modulator and ultra low noise narrow laser source for unrivaled link performance and dynamic range.

XiMod Receivers feature an InGaAs high-responsivity PIN photoreceiver for low noise and high linearity, and provide DC to 26 GHz bandwidth in a 2" x 3" housing.

XiMod modules are available in pre- and post-amplified versions to optimize your system requirements.

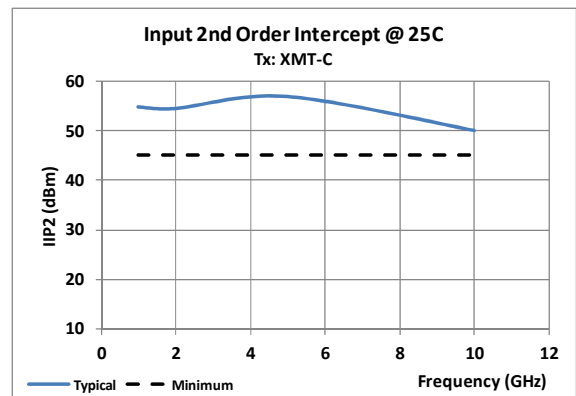
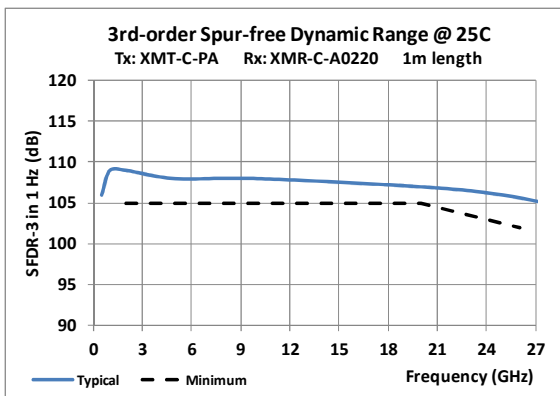
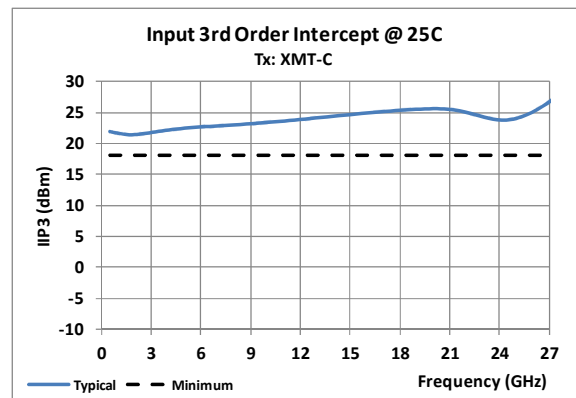
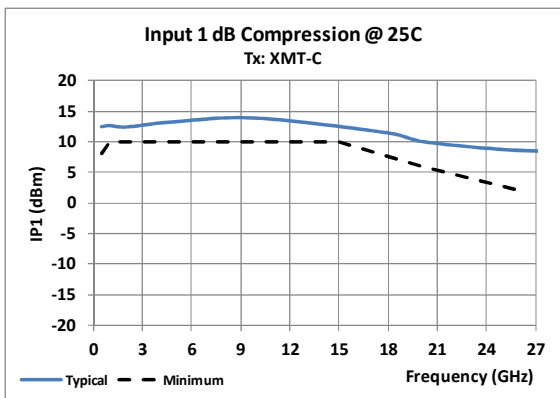
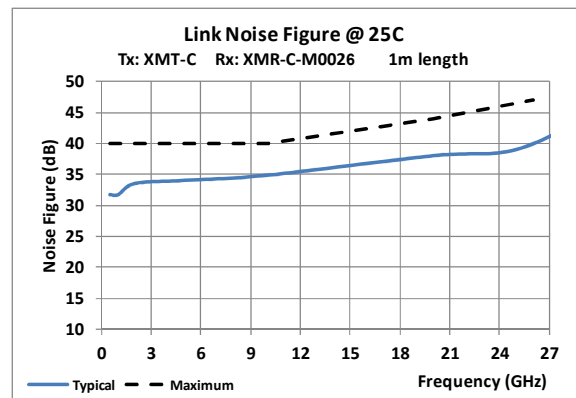
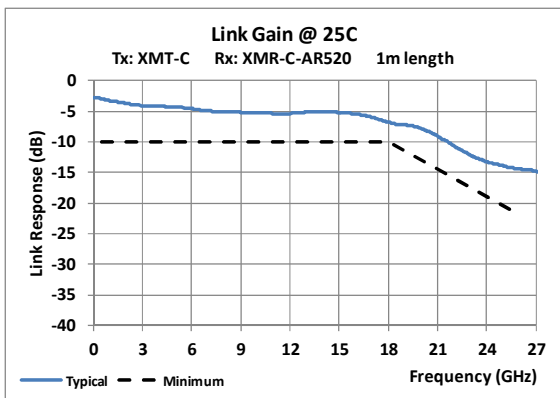
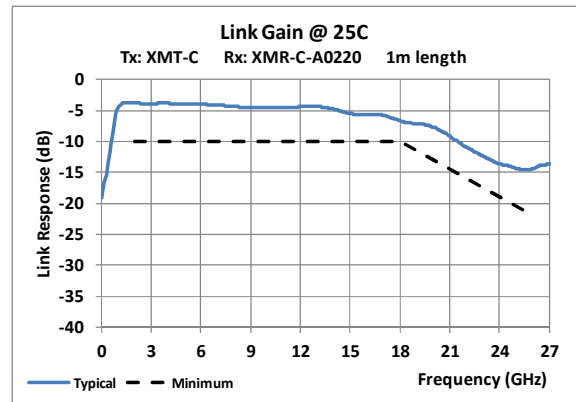
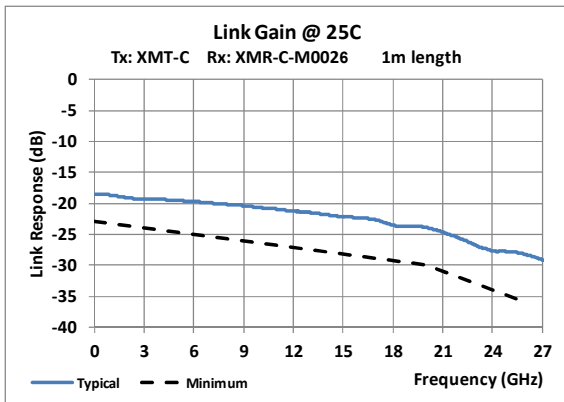
XiMod Fiber Optic Link Modules define the state of the art in performance, size and value.



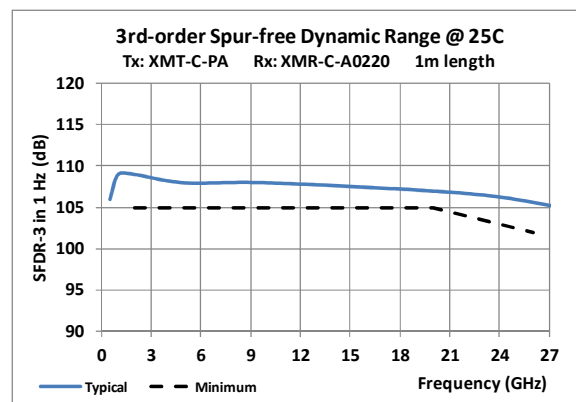
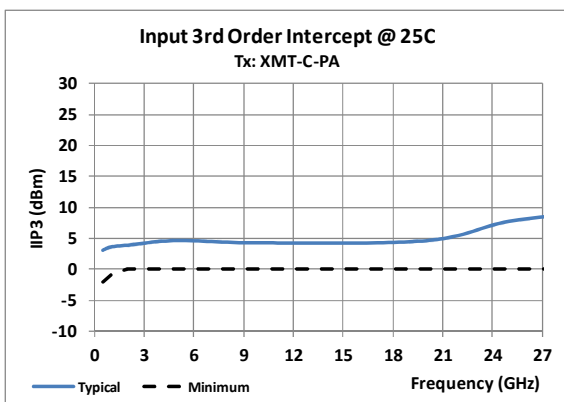
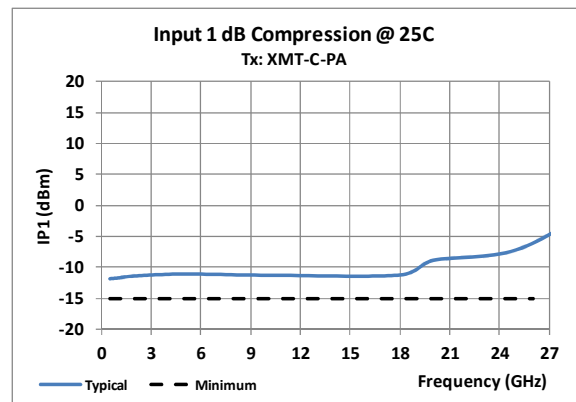
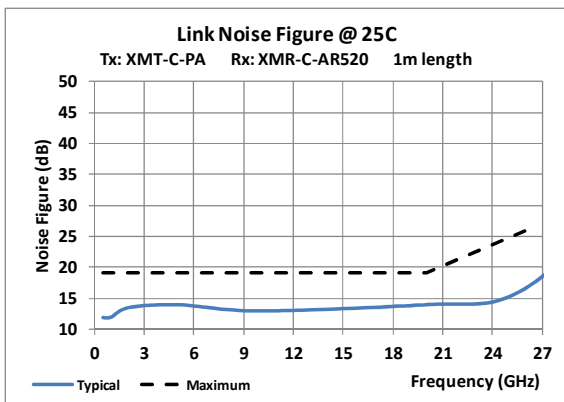
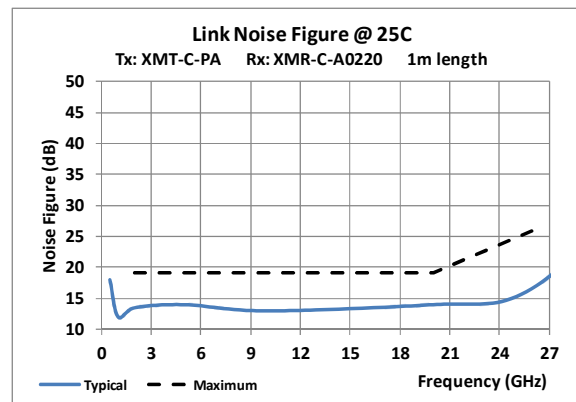
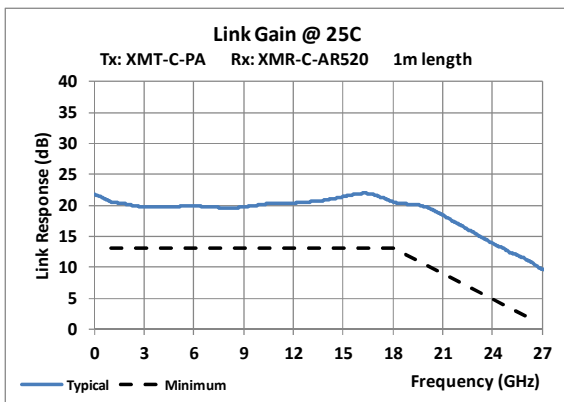
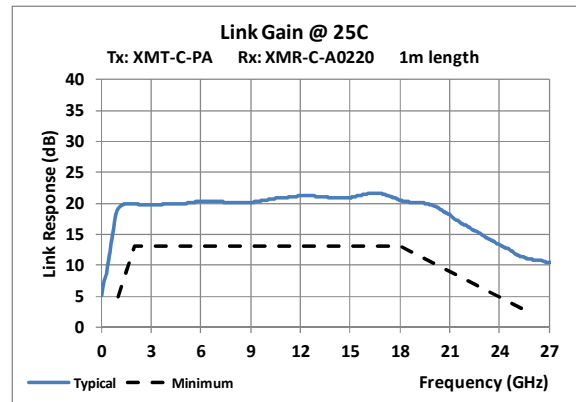
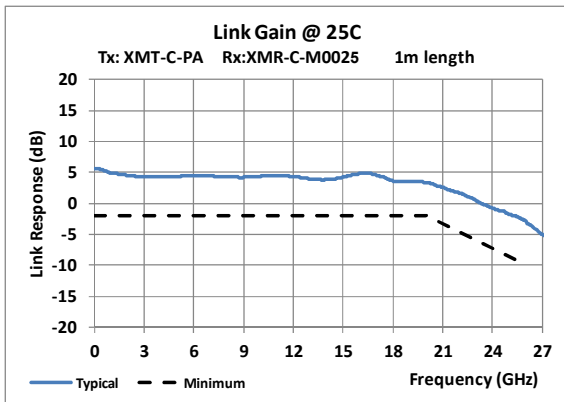
### XiMOD LINK PERFORMANCE, 1 m Fiber Length, T = 25 °C

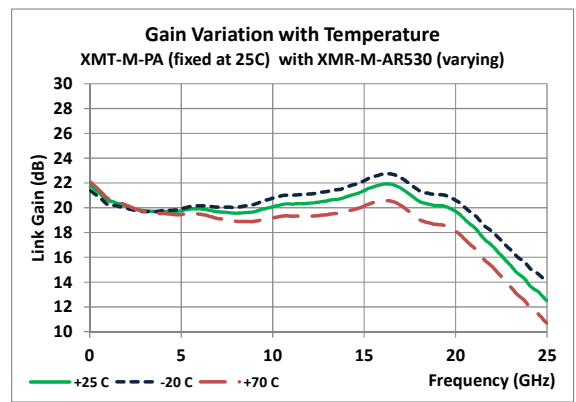
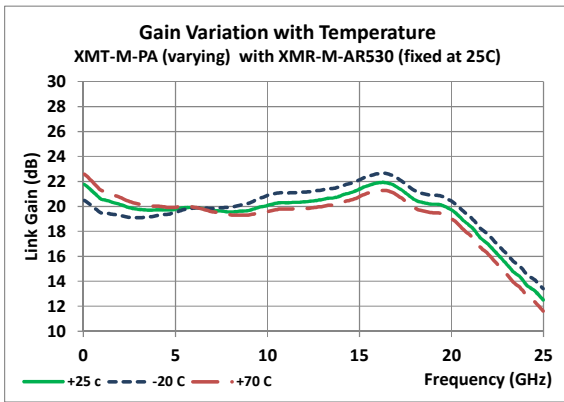
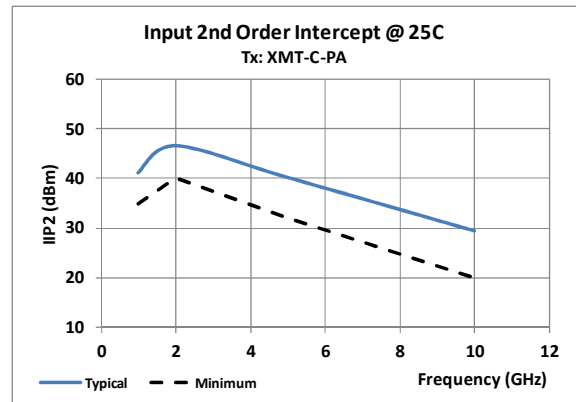
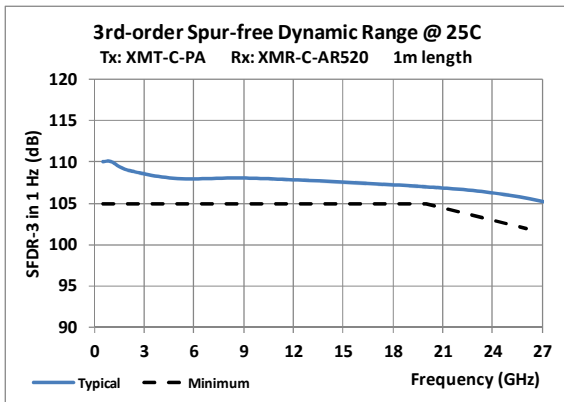
	Unamplified Transmitter XMT-C / XMT-M					Amplified Transmitter XMT-C / XMT-M							
	Unamplified Receiver		Amplified Receiver			Unamplified Receiver		Amplified Receiver					
	-M0020		-A0220			-M0020		-A0220					
Link Gain (dB)	GHz	min	typ	GHz	min	typ	min	typ	GHz	min	typ	min	typ
	0.01	-23	-19	0.5	--	--	-10	-4	0.01	--	--	13	21
	0.5	-23	-19	2	-10	-4	-10	-4	0.5	-2	5	13	20
	20	-30	-25	18	-10	-7	-10	-7	20	-2	4	18	20
	26	-36	-30	26	-22	-15	-22	-15	26	-10	-4	26	2
Noise Figure (dB)	GHz	max	typ	GHz	max	typ	max	typ	GHz	max	typ	max	typ
	0.01	40	33	0.5	--	--	40	34	0.01	--	--	19	12
	0.5	40	33	2	40	33	40	33	0.5	19	14	19	14
	20	44	38	20	44	38	44	38	20	19	14	19	14
	26	47	40	26	47	40	47	40	26	26	17	26	17
Input P1dB (dBm)	GHz	min	typ	GHz	min	typ	min	typ	GHz	min	typ	min	typ
	0.01	8	12	0.5	--	--	8	12	0.01	--	--	-15	-12
	0.5	8	12	2	10	12	10	12	0.5	-15	-12	-15	-11
	15	10	13	15	10	13	10	13	15	-15	-11	-15	-11
	26	2	8	26	2	8	2	8	26	-15	-7	-15	-7
Input IP3 (dBm)	GHz	min	typ	GHz	min	typ	min	typ	GHz	min	typ	min	typ
	0.01	18	20	0.5	--	--	18	22	0.01	--	--	0	3
	0.5	18	22	2	18	21	18	21	0.5	-2	3	0	4
	2	18	21	20	18	25	18	25	2	0	4	0	5
	26	18	25	26	18	25	18	25	26	0	8	0	8
3rd-order SFDR (dB-Hz <sup>2/3</sup> )	GHz	min	typ	GHz	min	typ	min	typ	GHz	min	typ	min	typ
	0.01	105	110	0.5	--	--	106	110	0.01	--	--	105	110
	0.5	106	110	2	106	110	106	110	0.5	105	110	105	109
	20	106	109	20	106	109	106	109	20	105	107	105	107
	26	103	107	26	103	107	103	107	26	102	105	102	105

■ UNAMPLIFIED XIMOD TRANSMITTER



■ AMPLIFIED **XIMOD** TRANSMITTER





■ **XiMOD ELECTRICAL / INTERFACE**

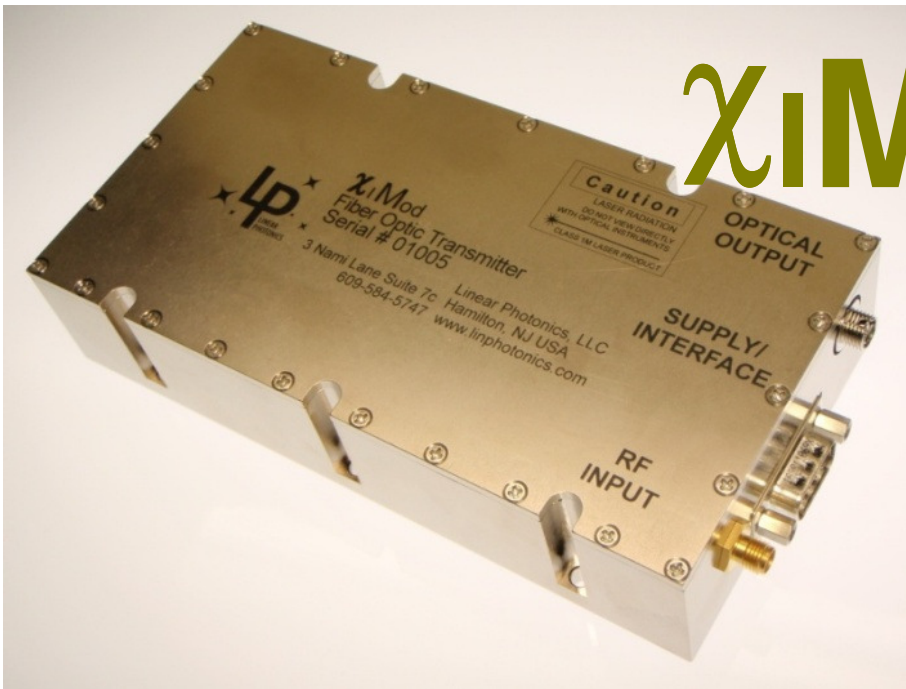
XiMod TRANSMITTER		
Function	Description	
pin 1	NO CONNECT	
pin 2	+5 ±0.25 V	Unamp: 4 A max      Amp: 4.5 A max
pin 3	NO CONNECT	
pin 4	ALARM	TTL Low Output if Overtemp or Overcurrent
pin 5	GROUND	
pin 6	OPTICAL PWR MON	Analog Output 4 mW/V
pin 7	POWER DOWN	TTL Low Input disables output power
pin 8	LASER CURRENT MON	Analog Output 100 mA/V
pin 9	EXTERNAL RESET	TTL Low Input pulse will reset modulator bias

XiMod RECEIVER		
Function	Description	
pin 1	NO CONNECT	
pin 2	+5 ±0.25 V	Unamp: 20 mA max      Amp: 200 mA max
pin 3	NO CONNECT	
pin 4	ALARM	TTL HIGH Output if low optical power
pin 5	NO CONNECT	
pin 6	OPTICAL PWR MON	Analog Output 0.5 V/mW
pin 7	NO CONNECT	
pin 8	NO CONNECT	
pin 9	NO CONNECT	

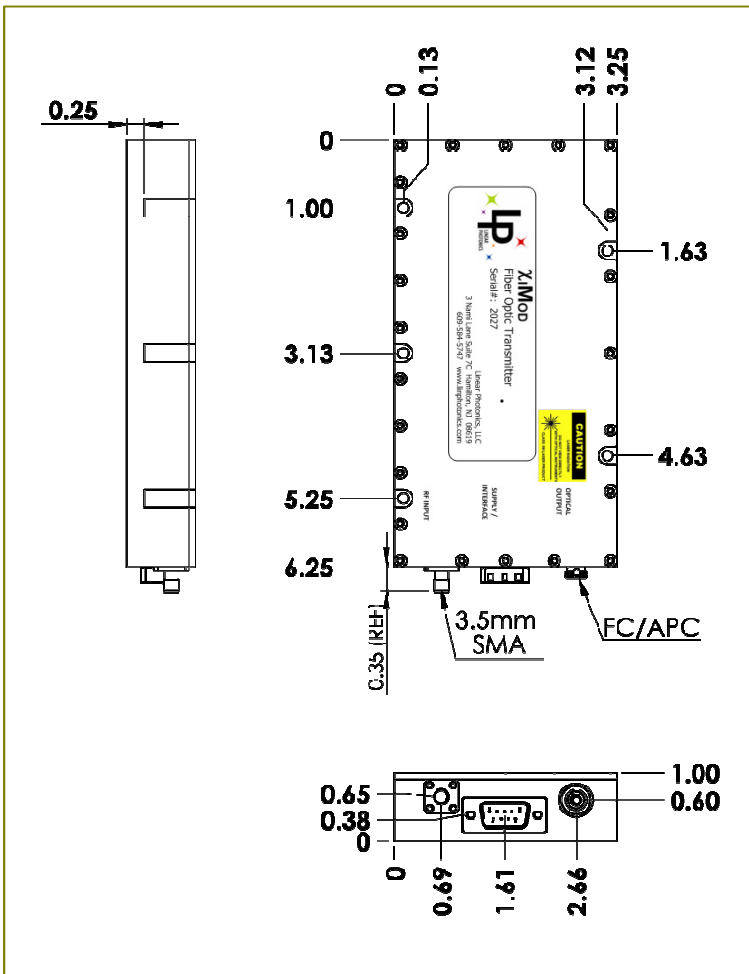
Transmitter Electrical/Interface Specifications		
Optical Wavelength	1550 ± 30	nm
Optical Power	8 (typ)	dBmo
Max RF Input		
	Amplified	+10 dBm
	Unamplified	+20 dBm
Input VSWR		
	0.5 to 18 GHz	2 : 1
	18 to 26 GHz	2.5 : 1
Operating Temperature		
	"C" version	0 to 50 °C
	"M" version	-20 to 70 °C

Receiver Electrical/Interface Specifications		
DC Responsivity	0.9 (typ)	A/W
Input Wavelength Range	1200 - 1600	nm
Maximum Optical Input Power	+10	dBmo
Output VSWR		
	0.5 to 18 GHz	2 : 1
	18 to 26 GHz	2.5 : 1
Operating Temperature		
	"C" version	0 to 50 °C
	"M" version	-20 to 70 °C

# XiMod-TX



## XiMOD Tx OUTLINE (inches)



## XiMOD Tx PART NUMBERING

XMT - t - a

t Temperature Range

C: 0 to 50°C

M: -20 to 70°C

a Amplifier Option

omitted: No Preamplifier, DC to 26 GHz

PA: Preamplifier 0.5-26 GHz

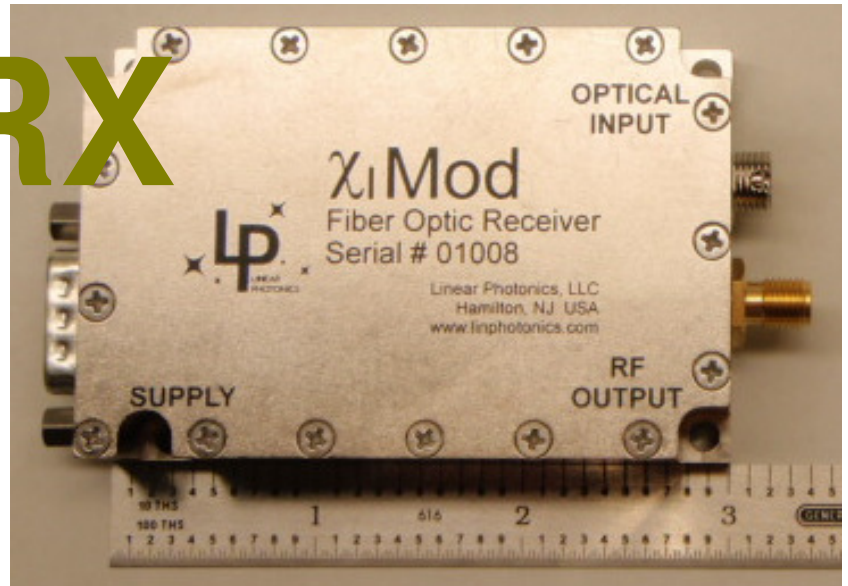
ex: XMT-C

XiMod Transmitter, 0 to 50°C

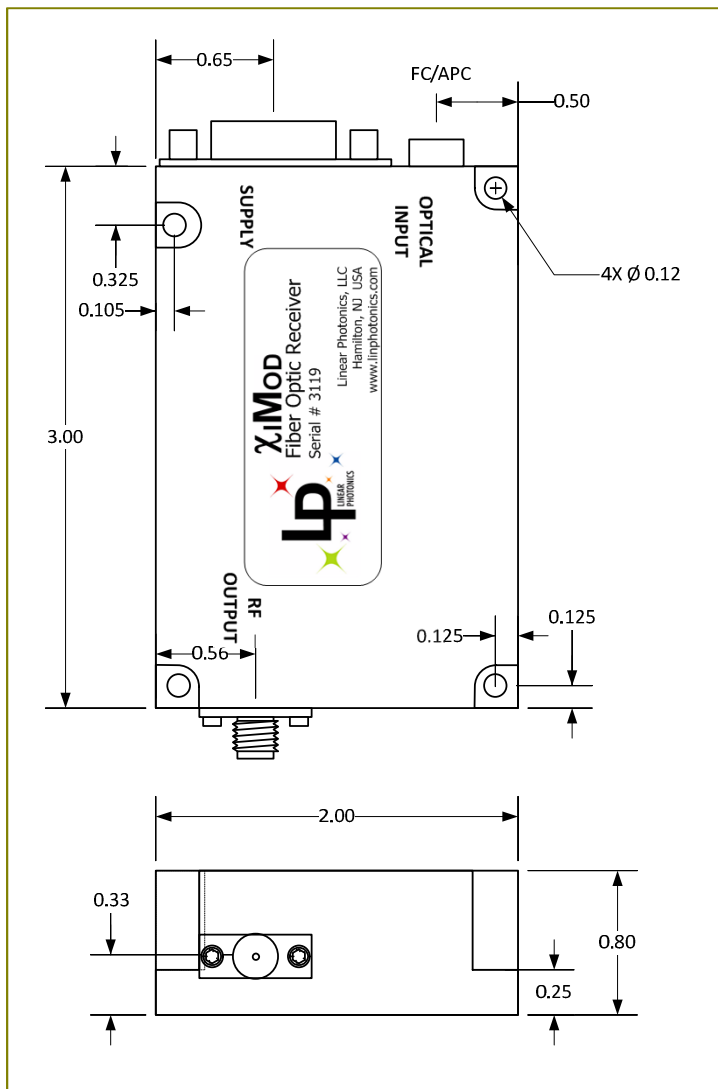
No Preamplifier

**Custom Options Available**  
**Contact us for Design Assistance**

# XiMod-RX



## ■ XiMOD Rx OUTLINE (inches)



## ■ XiMOD Rx PART NUMBERING

XMR - t - a

t Temperature Range

C: 0 to 50°C  
M: -20 to 70°C

a Amplifier and Band Options

M0026: DC to 26 GHz, Passive  
AR530: 0.5 to 26 GHz, Extended Low End Postamplifier

ex: XMR-M-M0026  
XiMod Receiver, -20 to 70°C  
DC to 26 GHz

**Custom Options Available**  
**Contact us for Design Assistance**