24926 Highway 108
Sierra Village, CA 95346
Phone: (800) 545-1022
Fax: (209) 586-1026
E-Mail: sales @olsontech.com

Model OLMT Miniature L-Band Transmitter

Features and Benefits

Compact wide-bandwidth L-Band transmitter offers excellent performance at low cost.

Wide bandwidth: 10-3,600MHz handles all CATV and satellite signals including up to four stacked polarizations.

Transmitter models available with 75Ω/"F" connector or 50Ω/SMA connector

Transmitters available with 1310nm DFB, 1550nm DFB or CWDM wavelength.

Standalone flange-mount for indoor mounting or used in a NEMA 3R enclosure for outdoor applications.

Low power consumption.

LED power indicator green when the transmitter is operating.

SC/APC optical connector standard. FC/APC optional.

The Olson Model OLMT Miniature L-Band Transmitter is a high performance, very wide bandwidth transmitter in a very compact package. The Model OLMT Miniature L-Band Transmitter has been engineered to meet today's high performance standards for L-Band transport. Its extreme bandwidth range allows the system to handle the next generation of satellite signals. The transmitter may be used with any L-Band receiver from Olson Technology, Inc. It is ideal for a wide variety of communications applications including L-Band satellite antenna remoting, trunking radio, telemetry tracking, plus GPS time and frequency reference signal distribution. The extended frequency range to 3.6GHz allows this system to accommodate additional transponders coinciding with common European satellite communication applications.

The enhanced bandwidth to 3.6GHz is also unique in that it facilitates stacked LNB applications to accommodate additional transponders containing enhanced DBS programming services (e.g., HDTV, local channels, etc.) over single-mode fiber for DBS television distribution in campus, fiber-to-the-premise (FTTx), and multiple dwelling unit (MDU) environments. The OLMT offers 75Ω output impedance standard, or 50Ω optional. Optical connector options include FC/APC and SC/APC. Power is via an Olson Model OTPS-12A power supply.

System Specifications

Optical Characteristics (with SM 9/125µm Fiber)

	Min	Typ	Max	Units
Tx Operating Wavelength		1310		nm
Optical Output Power (DFB)	+3		+5	dBm
Tx Operating Wavelength		1550		nm
Optical Output Power	+2.5		+4	dBm
Tx CWDM Operating Wavelength	1470		1610	nm
Optical Output Power	+2.5		+4	dBm
Optical Return Loss		>55		dB
Optical Connector		SC/APC		
		FC/APC		

Electrical and Environmental Characteristics

	Min	Typ	Max	Units
Power Supply Voltage (DC)	10	12	15	V_{DC}
Typical Current with +10V_{DC} Power		200		mA
Typical Current with +12V_{DC} Power		170		mA
Typical Current with +15V_{DC} Power		135		mA
Operating Temp. Range	-20		+60	°C
Storage Temp. Range	-20		+70	°C
Humidity	5		95	%

Physical Characteristics

	Min	Typ	Max	Units
Weight		5		oz.
		140		g
Dimensions (w/o mtg flanges)		3.25 x 2.84 x 0.87		in.
		83 x 72 x 22		mm

RF and System Characteristics

	Min	Typ	Max	Units
Frequency Response	10		3,600	MHz
Amplitude Flatness (>50MHz)	Any 500MHz / ±1.5			dB
	Any 40MHz / ±0.35			dB
Return Loss		10		dB
Input Impedance (F-Std.)		75		Ω
Input Impedance (SMA-Option)		50		Ω
Tx Input $IP3_3$		-9.5		dBm
Tx Input 1dB $Compression_3$		>-17		dBm
Tx Total RF $Input\ Power_3$		-22		dBm
Tx RF Input per Transponder		-37		dBm

NOTES:

1) RF Specifications are cited at a 10dB optical loss, 2GHz and >55dB optical return loss.
2) If the optical loss differs from 10dB, the RF gain changes 2dB for each 1dB of optical loss. (i.e., a link with 6dB of optical loss will have a minimum RF gain of +3dB.)
3) When optimizing RF performance, the main concern is setting the RF signal level. Typically, the optimal total RF power into the transmitter should be near -37dBm (+11dBmV) per transponder, assuming 32 transponders; this corresponds to a total RF input power level of -22dBm. Due to the wide dynamic range of this system, the RF input power can deviate considerably from this optimal value and still provide good results.
4) NOTE: The OLMT L-Band transmitter does NOT have an option to power an LNB. Olson's other L-Band transmitters, the OLRT and OLAT series, do have this option available.

Ordering Information

Transmitter Part Numbers

OLMT-X3613-D5-75-SA	Mini L-Band Transmitter, DFB, 1310nm, +5dBm, 75Ω, SC/APC
OLMT-X3613-D5-75-FA	Mini L-Band Transmitter, DFB, 1310nm, +5dBm, 75Ω, FC/APC
OLMT-X3615-D4-75-SA	Mini L-Band Transmitter, DFB, 1550nm, +4dBm, 75Ω, SC/APC
OLMT-X3615-D4-75-FA	Mini L-Band Transmitter, DFB, 1550nm, +4dBm, 75Ω, FC/APC
OLMT-X36-ww-C4-75-SA	Mini L-Band Transmitter, CWDM, +4dBm, 75Ω, SC/APC
OLMT-X36-ww-C4-75-FA	Mini L-Band Transmitter, CWDM, +4dBm, 75Ω, FC/APC
OLMT-X3613-D5-50-SA	Mini L-Band Transmitter, DFB, 1310nm, +5dBm, 50Ω, SC/APC
OLMT-X3613-D5-50-FA	Mini L-Band Transmitter, DFB, 1310nm, +5dBm, 50Ω, FC/APC
OLMT-X3615-D4-50-SA	Mini L-Band Transmitter, DFB, 1550nm, +4dBm, 50Ω, SC/APC
OLMT-X3615-D4-50-FA	Mini L-Band Transmitter, DFB, 1550nm, +4dBm, 50Ω, FC/APC
OLMT-X36-ww-C4-50-SA	Mini L-Band Transmitter, CWDM, +4dBm, 50Ω, SC/APC
OLMT-X36-ww-C4-50-FA	Mini L-Band Transmitter, CWDM, +4dBm, 50Ω, FC/APC

NOTES:

1) The "ww" in the Transmitter part number is the CWDM wavelength, e.g. "47" = 1470nm, "61" = 1610nm.

Power Supply Part Number

OTPS-12A	Universal AC Power Supply, +12 Volts DC, 1.5 Amps