

The ModBox-TTX is a wavelength tunable laser source designed for operation in laboratory or test in production.

The ModBox-TTX external cavity laser (ECL) offers an unparalleled combination of optical performances : low frequency resolution, narrow linewidth, high purity, high optical power.

Based on LiNbO₃ modulators, a variety of modulation options are proposed with the ModBox-TTX to make it a versatile high speed-high data rates applications equipment.

FEATURES

- Narrow linewidth : 100 kHz
- High SMSR
- C, L or A band
- High optical power : up to 15.5 dBm
- PC controlled

APPLICATIONS

- Laboratory
- Production test

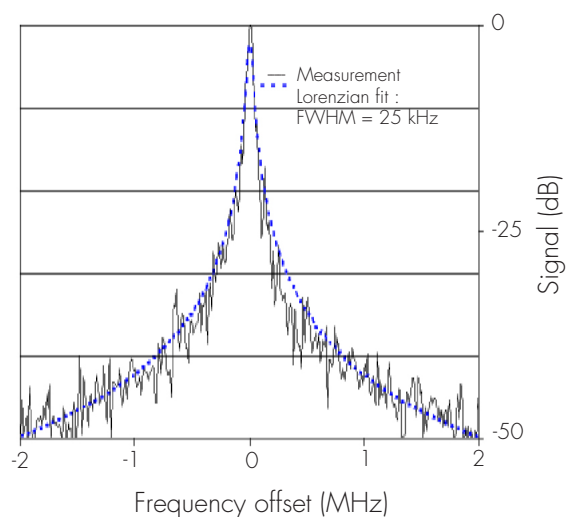
OPTIONS

- Multi-channel version
- 10 Gb/s external modulation
- 40 Gb/s external modulation
- Analog modulation
- Specific modulation format QPSK, DPSK, ODB,...

Performance Highlights

Parameter	Min	Typ	Max	Unit
Optical Wavelength range	1529 1528 1570	-	1567 1566 1608	nm
Optical output power adjustment range (with high power option)	7	-	13.5 (15.5)	dBm
Linewidth	-	-	100	kHz
Frequency fine tune resolution	-	1	-	MHz
SMSR	40	55	-	dB

Self-heterodyne spectrum



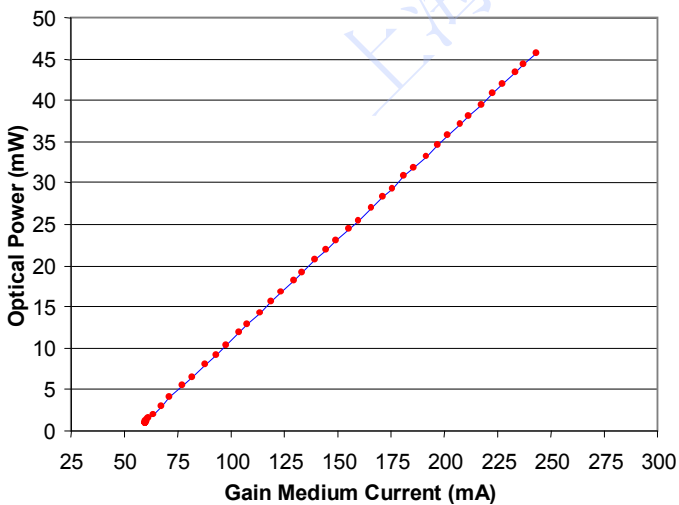
Tunable Laser Optical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Optical wavelength range	$\lambda_{A\text{-band}}$	A band version	1529.16	-	1567.13	nm
	$\lambda_{C\text{-band}}$	C band version	1527.60	-	1565.50	nm
	$\lambda_{L\text{-band}}$	L band version	1570.01	-	1608.76	nm
Optical output power adjustment	P_{CW}	Standard version	7	-	13.5	dBm
		High power version	7	-	15.5	dBm
Frequency fine tune resolution	FTF	-	-	1	-	MHz
Optical output power accuracy	$P_{CW\text{-acc}}$	-	-1	-	1	dB
Wavelength accuracy	$\Delta\lambda_{\text{acc}}$	-	-1.5	-	1.5	GHz
Linewidth	$\Delta\lambda$	FWHM @-3 dB, instantaneous	-	-	100	kHz
Side Mode Suppression Ratio	SMSR	-	40	55	-	dB
RIN	RIN_7	For 7 dBm output power	-	-	-140	dB/Hz
	RIN_{13}	For 13 dBm output power	-	-	-145	

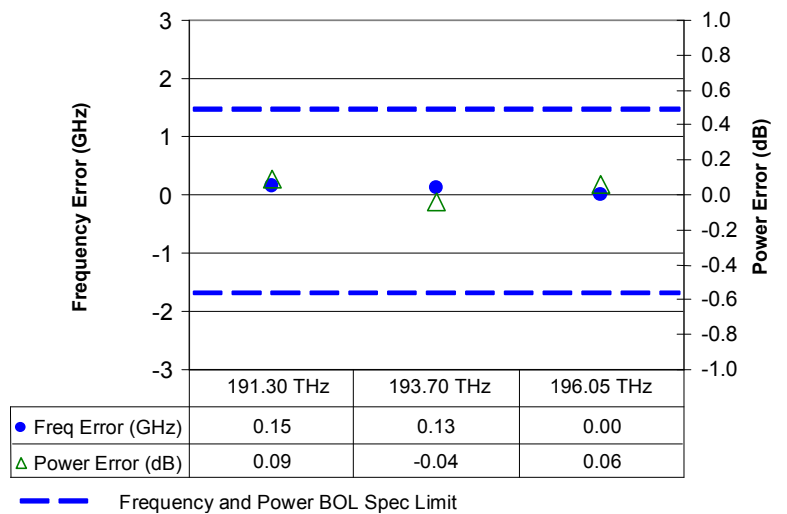
Environment

Parameter	Symbol	Min	Max	Unit
Operating temperature	OT	+10	+35	°C
Storage temperature	ST	-40	+85	°C

PI curve at 193.50 THz



Frequency and power error, 25 °C, 13.5 dBm



ModBox-TTX version


Dimensions	
Dimensions	19 inches x 2U or 3U
Weight	1.5 kg - 3.3 pounds
Power supply (rear panel)	100 - 120 V / 220 - 240 V automatic switch, 50 - 60 Hz
Interfaces	
Optical connectors	FC/UPC - FC/APC
Fiber	Polarization maintaining fiber, PM1550
Remote type	USB with Labview driver
Remote connector	USB type B
Compliance	
Safety	EN 60625-1
Marking	CE

Ordering Information
ModBox-TTX-AP-CP-LP-XX

A = A band - C : C band - L : L band

P = Output power, P : 13.5 dBm - H : 15.5 dBm

XX = Output connector, 00 : bare fiber - FA : FC/APC - FC : FC/SPC

Example : ModBox-TTX-CH-LP-FA is a ModBox-TTX with two lasers : C-band 15.5 dBm, L-band 13.5 dBm, FC-APC

About us

Photline Technologies is a provider of Fiber Optics Modulation Solutions based on the company LiNbO_3 modulators and high-speed electronics modules. Photline Technologies offers high speed and high data rate modulation solutions for the telecommunication industry and the defense, aerospace, instruments and sensors markets. The products offered by the company include : comprehensive range of intensity and phase modulators (800 nm, 1060 nm, 1300 nm, 1550 nm), RF drivers and modules, transmitters and modulation units.

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