

Wavelength Swept Laser with Pigtail

TLDAXBXXSMX



Key Features

- C-or L-band
- Continuous Wavelength Sweep
- TEC and Thermistor Inside
- Simple Tuning Algorithm
- Small Package Size

Applications

- Test and Measurement
- FBG Sensing Systems
- Gas Sensing
- Laser Spectroscopy
- Filter Characterization

I. Optical Characteristics ($T_{OP} = 0$ to $70^{\circ}C$)

Parameter	Min	Typ	Max	Unit
Output Power	0	5	10	dBm
Output Power Variation		0.05		dB
Power Stability @ 12hour		0.05		dB
Wavelength	C- or L-band			
Tuning range		60		nm
Side-Mode Suppression Ratio (SMSR)	35	38		dB
Optical Isolation	25			dB
Linewidth		3	5	MHz
Relative Intensity Noise (RIN)		-135		dB/Hz
Wavelength Sweep Operation				
Continuous Sweeping Range (at a fixed operating temperature)		30		nm
Wavelength Resolution		5		pm
Wavelength Accuracy		± 10		pm
Wavelength Repeatability		± 5		pm
Sweeping Speed		50		nm/s

II. Electrical and Thermal Characteristics ($T_{OP} = 0$ to $70^{\circ}C$)

Parameter	Symbol	Min	Typ.	Max	Unit
Operating Case Temperature	T_{OP}	0		70	$^{\circ}C$
Laser Chip Temperature	T_L	5		65	$^{\circ}C$
Laser Gain Current	I1		60	150	mA
Channel Selector Current	I2			100	mA
Fine Tuning Current	I3			100	mA
Photodiode Bias Voltage	$V_{PD,ref}$	-3		0	V
Photodiode Current	I_{PD}	20		1000	μA
Photodiode Dark Current	I_D			100	nA
Thermistor Resistance	R_{th}	9.5	10	10.5	$K\Omega$
Thermistor Sensitivity Index	β		4050		
TEC Current	I_{TEC}		0.5	1	A
TEC Voltage	V_{TEC}		2.2	3	V

III. Mechanical Specifications (Dimensions are in millimeters)

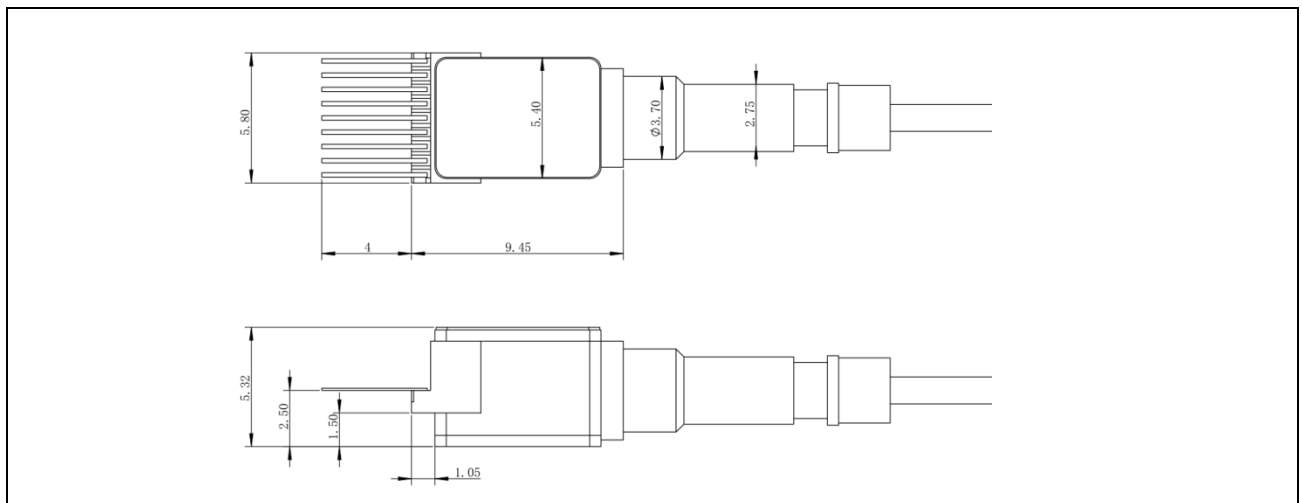


Figure 1. Mechanical Dimensions

IV. Pin Descriptions

Pin	Symbol	Description
1	TEC+	TEC anode
2	TEC-	TEC cathode
3	GND	Ground
4	LD1	Gain bias
5	GND	Ground
6	PD-	Monitoring PD
7	LD2	Channel selector
8	LD3	Fine tuning
9	RTH	Thermistor