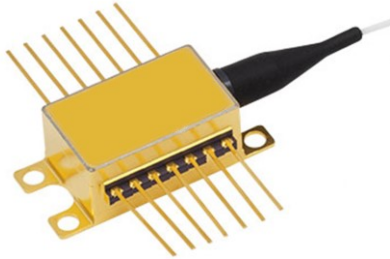


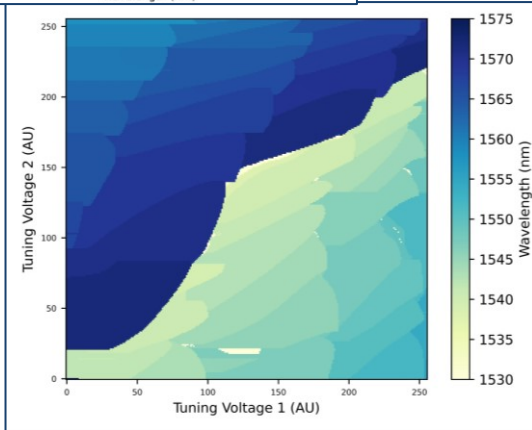
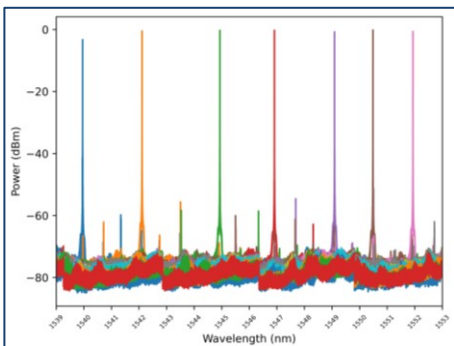


Low Linewidth Fast Tunable Laser



Pilot Photonics' tunable lasers are InP monolithic single mode lasers in the C-band and O-band. The lasers exhibit a tuning range of > 30 nm centered at 1550 nm, with distinct mode-islands and high side-mode suppression ratio. The tuning of these devices rely on reverse-voltage controlled electro-optic effect which results in a fast switching, low linewidth < 150 kHz and low power consumption.

These lasers are offered in standard 14-pin butterfly packages, with a thermo-electric cooler, internal isolators, and polarization-maintaining (PM) fiber pigtail with FC/APC connectors. Other configurations are available upon request.



Features

- Single mode laser chip
- Monolithic design
- C-band and O-band wavelength
- Very wide tuning range
- High side-mode suppression ratio
- Output power = 0 dBm
- Low linewidth laser
- Fast switching and tunable through voltage
- Nanosecond switching times

Applications

- Dense Wavelength Division Multiplexing (DWDM)
- Coherent optical communications
- Distributed fiber sensing & gas sensing
- Sensor interrogation
- Fiber optic testing

Typical Specifications

Central wavelength	1550 nm
Switching speed	< 5ns
RIN	< -150 dB/Hz
Tuning range	35 nm
Side-Mode-Suppression Ratio	45 dB
Output power	0 dBm
Linewidth	< 150 kHz

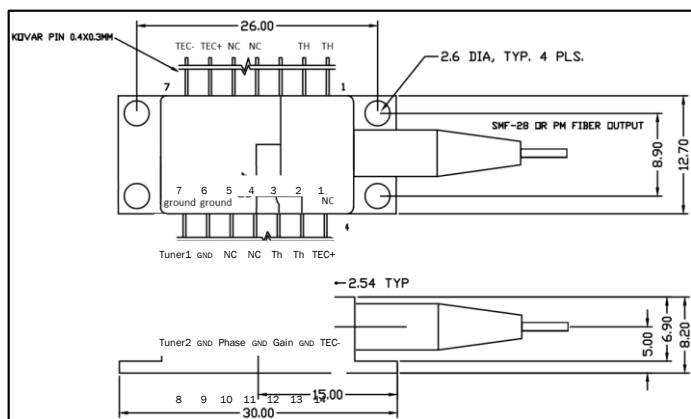




Tunable Laser

Fast, widely tunable & low linewidth

Optical Specifications	Min.	Typ.	Max.	Unit	Notes
Centre Wavelength		1550		nm	
Tuning Range	30	35	40	nm	
Output Power		0	16 *	dBm	*With SOA at the output
Side-mode suppression ratio (SMSR)	40	45	50	dB	
Switching Speed		<5		ns	
RIN		-150		dB/Hz	
Linewidth	100	150	200	kHz	
Operating Specifications					
Reverse Voltage (any section)	-	-	10	V	
Total Power Consumption		3		W	PIC and TEC
TEC Voltage	-2		2	V	
TEC Current	-1	0	1	A	
Chip Temperature	15	20	40	°C	
Case Temperature	-5	25	85	°C	
Storage Temperature (Non-operational)	-20		70	°C	
Physical Specifications					
Dimensions		2.3 x 1		mm	Bare die
Optical isolation		30		dB	
Polarization Extinction ratio	17	20	25	dB	
Fiber type		Corning PANDA PM			In butterfly packages, slow axis aligned
Fiber connector		FC/APC			In butterfly packages, narrow key



Pin Description			
1	TEC+	8	Tuner 2
2	Thermistor (10 kΩ)	9	Ground
3	Thermistor (10 kΩ)	10	Phase
4	Not Connected	11	Ground
5	Not Connected	12	Gain
6	Ground	13	Ground
7	Tuner 1	14	TEC-

