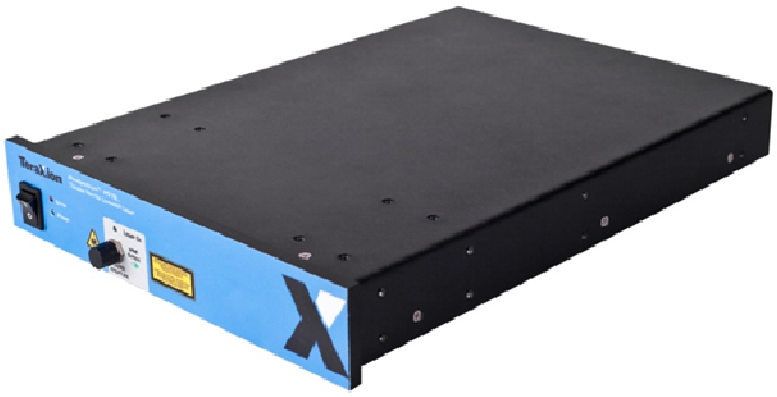
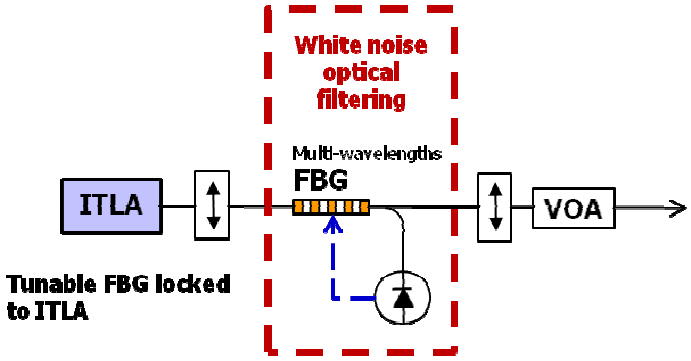
PureSpectrum™

TNL–TUNABLE NARROW LINEWIDTH LASER

The PureSpectrum™-TNL sets the mark for next-generation ITLA performances.



The PS-TNL is an ITLA based, C-band tunable, narrow-linewidth laser source, featuring optical filtering of white frequency noise by an ultra narrowband multi-wavelengths Fiber Bragg Grating (FBG), optimized for coherent communications research.



Features

- Dual-mode laser source: Native ITLA and white noise suppressed
- 1 kHz linewidth
- Optional VOA for uniform output power

Applications

- Coherent communications research (CW signal & local oscillator—LO)
- Test & measurement

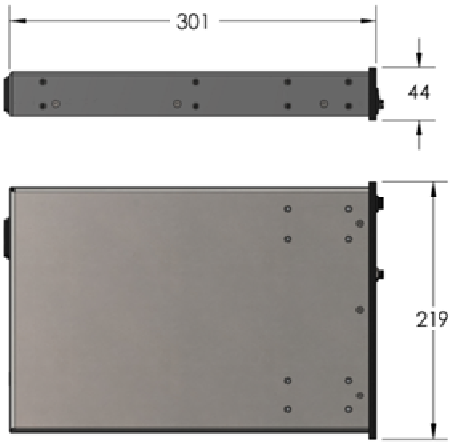
Optical Characteristics

	Units	Specifications
Wavelength Range	nm	1527.6 – 1565.5
Grid Spacing[1]		Gridless operation
Frequency Resolution	MHz	1
Linewidth[2]	kHz	< 1
Frequency Noise	Hz^2/Hz	<800 (50 MHz – 200 MHz) <100 (200 MHz – 500 MHz) <50 (>500 MHz)
Relative Intensity Noise	dBc/Hz	<-120 (1 MHz - 100 MHz) <-150 (>100 MHz)
Side Mode Suppression Ratio	dB	50 typ.
Maximum Optical Output Power	dBm	10 typ.
Power Attenuation Range	dB	> 20
Power Setting Resolution	dB	0.1
Polarization Extinction Ratio	dB	> 17
Output Type		CW

Typical specifications may vary depending upon user's requirements.
(1): Tuning condition is “set and position” (2 min. typical for the tuning and alignment) - no continuous sweep tuning.
(2): Lorentzian contribution to linewidth calculated from white frequency noise value at >500 MHz: $\Delta v = \pi S_0$
(3): Other connectors optional

General Characteristics

Dimensions	mm	H: 44; W: 219; D: 301 1U, 42 HP, rackmount
Optical Connector[3]		FC/APC
Fiber Type		9/125 Panda PMF
Communication Port		USB 2.0
Operating Conditions	°C	+10 to +35
Storage Conditions	°C	-40 to +85



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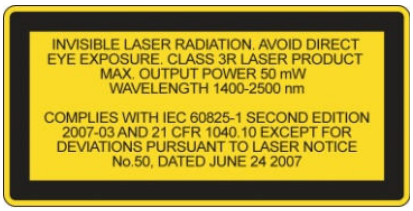
Laser safety information



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