

ACP92001C 50GHz (96CH) C Band ITU Tunable Laser Source Module



ACP92001C is a tunable laser module compatible with the OIF “Integrable Tunable Laser Assembly” MSA, based on novel monolithic InP chip that integrates a tunable laser with a semiconductor optical amplifier (SOA). The tunable laser is an electronically tuned device that can address any wavelength in the C-band. Since no mechanical or thermal adjustments are necessary, channel switching is fast with straight forward control circuitry. The SOA facilitates flexible control of the output power and acts as a shutter when reverse biased, enabling dark tuning between channels. The integrated chip has been optimized to improve power efficiency. The chip is based on advanced InP technology platform, with proven reliability. The devices are packaged into a compact, low-profile hermetically sealed package, with an internal optical isolator and a wavelength locker. The locker monitors both output power and frequency of the light emitted from the front facet of the chip, enabling a closed loop control that guarantees stability of frequency and output power over lifespan, to within the requirements of 50GHz ITU grid spacing applications. The assembly contains all electronics necessary to control the laser, offering users a simple and well-defined digital command interface.

PERFORMANCE SPECIFICATIONS

Parameter	Specifications				
	Symbol	Test Conditions	Min.	Typ.	Max.
Frequency Range	F	-	191500GHz		196000GHz
Channel Space		-		50GHz	
Absolute Frequency Accuracy		-	-1.5GHz		+1.5GHz
Relative Frequency Accuracy		-	-1.0GHz		+1.0GHz
Wavelength Repeatability		-	±5pm	±2.5pm	
Wavelength Stability		-	±3pm		
Output Power	Po	-		+13.0dBm	
Output Power Stability		-	±0.03dB (over 1hr) ±0.05dB (over 24hrs)	±0.01dB (over 1hr) ±0.03dB (over 24hrs)	
Output Power Repeatability		-	±0.05dB	±0.01dB	
Channel Switch Speed	tT	-		0.03s	0.10s
Side Mode Suppression Rate	SMSR	-	40dB		50dB
Spectral Linewidth	FWHM	-	300KHz	500KHz	
Relative Intensity Noise	RIN	20MHz – 10GHz	-145dB/Hz	-140dB/Hz	
Optical Isolation		-	40dB		
Polarization Extinction Ratio	PER	-	20dB		
Power Supply	110 ~ 230V; 50 ~ 60Hz AC Power				
Optical Connector	FC/UPC				
Package Dimensions (HxWxD)	38.5mm x 149.5mm x 164.0mm				
Weight	0.5kg				

FEATURES

OIF “Integrable Tunable Laser Assembly” MSA Compatible Laser and Control Electronics Assembly

Full C-band Tuning (96 channel 50GHz spacing)

High Side-mode Suppression Ratio (>40dB)

Compatible with 50GHz ITU Grid Spacing

FM Dither for SBS Suppression

Polarization Maintaining Fiber Pigtail

APPLICATION

DWDM Transmission Systems

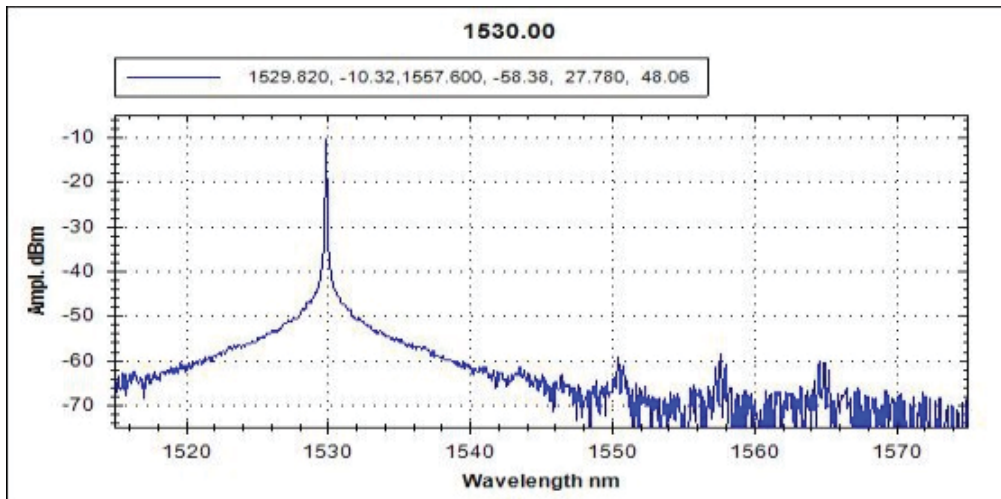
Tunable DWDM Transponders and Transceivers

Dynamic Provisioning and Wavelength Routing in Metro DWDM Systems

Optical Packet or Burst-mode Switching Test and Measurement

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Typical Output Spectrum



COMPUTER GUI

